DOCUMENT RESUME

ED 250 560 CE 040 132

AUTHOR Kinter, Ona Kay; Marco, Gayle J.
TITLE New and Emerging Occupations: Vocational Guidance and Counseling of Disadvantaged Students. Final Report.
INSTITUTION Pittsburgh Univ., Pa. Dept. of Vocational Education.
SPONS AGENCY Pennsylvania State Dept. of Education, Harrisburg. Bureau of Vocational and Technical Education.
PUB DATE 30 Jun 84
NOTE 82p.
PUB TYPE Reports - Descriptive (141) -- Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Career Awareness; *Career Counseling; *Career Guidance; *Counseling Techniques; *Counselor Training; Definitions; *Disadvantaged; Educational Needs; *Emerging Occupations; Evaluation Methods; Inservice Education; Job Analysis; Needs Assessment; Postsecondary Education; Profiles; Questionnaires; Secondary Education; Student Characteristics; Student Evaluation; Workshops
IDENTIFIERS Special Needs Students

ABSTRACT

A project was conducted to plan and conduct a one-day workshop to assist counselors in providing vocational guidance to disadvantaged students. The objectives of the workshop, which was held by the Department of Vocational Education of the University of Pittsburgh, were as follows: to generate awareness of new and emerging occupations and occupational skills; to develop awareness of the relationship between academic preparation and occupational training; to enable vocational guidance and counseling personnel to relate the interests, aptitudes, and needs of disadvantaged students to meaningful occupational preparation; and to provide vocational guidance and counseling personnel with an organized series of personal experiences and printed materials to help them to provide incentive-engendering counseling to disadvantaged students. (This project report includes the workshop agenda, a discussion of the definition and characteristics of disadvantaged learners, criteria for developing a learner analysis profile and a sample profile, a disadvantaged learner characteristics rating scale, excerpts from a guide on career exploration, detailed procedures for analyzing occupations, an occupational perceptions worksheet, a workshop exit evaluation, and a summary of responses to the exit evaluation.) (MN)

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FINAL REPORT

NEW AND EMERGING OCCUPATIONS: VOCATIONAL GUIDANCE AND COUNSELING OF DISADVANTAGED STUDENTS

(Contract Number: 94-4010)

DR. ONA KAY KINTER
DR. GAYLE J. MARCO

UNIVERSITY OF PITTSBURGH
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ABSTRACT

(Contract Number: 94-4010) NEW AND EMERGING OCCUPATIONS: VOCATIONAL GUIDANCE AND COUNSELING OF DISADVANTAGED STUDENTS.

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$8,076.00
7/1/83 - 6/30/84

The purpose of this project was to plan and conduct a one-day workshop to provide counselors with assistance in vocational guidance of disadvantaged students. Information was provided on the changing nature of work and concurrent needs of the disadvantaged for assessment, placement, and support.

Objectives

The objectives of the one-day workshop:

1. Generate awareness of new and emerging occupations and occupational skills.
2. Develop awareness of the relationship between academic preparation and occupational training, particularly vocational education
3. Enable vocational guidance and counseling personnel to relate the interests, aptitudes, and needs of the disadvantaged students to meaningful occupational preparation (through vocational education)
4. Provide vocational guidance and counseling personnel an organized series of personal experiences and printed materials that will help them to provide incentive-engendering guidance and counseling to disadvantaged students.

Outcomes

A one-day workshop was planned and conducted by the University of Pittsburgh Vocational Education Department on December 9, 1983 at 5J10 Forbes Quadrangle, University of Pittsburgh.

Audience

Western Pennsylvania (vocational) guidance and counseling personnel.

Published Materials

Final Report

1. BACKGROUND

The National Commission on Excellence in Education (A Nation at Risk, April 1983) proclaimed:

> All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competency guided, can hope to attain the mature and informed judgment needed to secure gainful employment, and to manage their own lives, thereby serving not only their own interests but also the progress of society itself. . . . Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world.

The report continues, enumerating "Indicators of the Risk," which include:

- Some 23 million American adults are functionally illiterate by the simplest tests of everyday reading, writing, and comprehension.
- About 13 percent of all 17-year-olds in the United States can be considered functionally illiterate. Functional illiteracy among minority youth may run as high as 40 percent.
- Business and military leaders complain that they are required to spend millions of dollars on costly remedial education and training programs in such basic skills as reading, writing, spelling, and computation. . . .

These deficiencies come at a time, cites the report, "when the demand for highly skilled workers in new fields is accelerating rapidly." Paul Hurd, educational researcher, is quoted: "We are raising a new generation of Americans that is scientifically and technologically illiterate."

In A Nation at Risk, high schools are indicted on grounds that:

> Secondary school curricula have been homogenized, diluted, and diffused to the point that they no longer have a central purpose . . . . Students have migrated from vocational and college preparatory programs to "general track" courses. The proportion of students taking a general program of study has increased from 12 percent in 1964 to 42 percent in 1979. This curricular smorgasborg, combined with extensive student choice, explains a great deal about where we find ourselves today.

From this report (A Nation at Risk) and others, as well as the individual observations heard daily in our schools and workplaces, it is evident that the educational body of the nation must redesign its outlooks and efforts to accomplish some major goals. Among these, as part of a cohesive management plan, must be: awareness of the changing technology that is now and will soon (at rapid pace) affect what we are preparing to do, and awareness of how illiteracy generated through both the sociological and educational arenas can be treated through occupational preparation that is relevant to the interests and aptitudes of the individual.

The demand for highly skilled workers in new fields is accelerating rapidly, thus requiring that people involved in providing guidance and counseling for students in our public schools be knowledgeable about the nature of the occupations, the training required, and the prerequisites for that training.

At the same time the new technologies are emerging (and will impact on the economic development and security of the State and locale as well as on the individuals who reside therein), current labor market projections in Pennsylvania point toward a need for new trained workers in existing occupational areas such as retailing, office occupations, and food service (Pennsylvania Bureau of Employment Security). Secondary schools have a responsibility to help direct students toward meaningful occupational preparation as well as college preparation. Nation at Risk concludes that:

> Secondary school curricula have been homogenized, diluted, and diffused to the point that they no longer have a central purpose. . . . Students have migrated from vocational and college preparatory programs to "general track" courses in large numbers.

Persons responsible for helping students to make wise choices about their futures also have a need and responsibility to help themselves

learn about the opportunities available to students through vocational education. Too often it is charged that guidance and counseling personnel have too little familiarity with vocational education. Some of the fault lies with these people. We must also assume, however, that it lies also with our segmented system of professional personnel development; i.e., perhaps they cannot be expected to relate information to students that they do not have within their own grasp.

Students in our secondary schools who are classified as "disadvantaged" are, perhaps more than any other "group," in need of informed, reliable guidance--not only that kind of guidance that helps them decide "who they are," but also the kind that helps them decide "where they are going."

II. PURPOSE

The purpose of the project was to plan and conduct a one-day workshop for counselors of disadvantaged students, "New and Emerging Occupations: Vocational Guidance and Counseling of Disadvantaged Student," at which materials and resources relevant to vocational guidance of disadvantaged students could be presented in a seminar setting.

III. OBJECTIVES

The objectives of the one-day workshop were:

1.0 To generate awareness of new and emerging occupations and occupational skills.

2.0 To develop awareness of the relationship between academic preparation and occupational training, particularly vocational education.

3.0 To enable (vocational) guidance and counseling personnel to relate the interests, aptitudes, and needs of disadvantaged students to meaningful occupational preparation (through vocational education).

4.0 To provide (vocational) guidance and counseling personnel an organized series of personal experiences and printed materials that will help them to provide incentive-engendering guidance and counseling to disadvantaged students.

IV. PROCEDURES

The one-day workshop was held on Friday, December 9, 1983, from 8:30 a.m. to 2:30 p.m. at the University of Pittsburgh for persons who are involved in providing vocational guidance and counseling for disadvantaged secondary students.

Letters of invitation and reservation forms (Appendix A) were mailed to counselors in all public-sector secondary schools in Western Pennsylvania five weeks prior to the date of the workshop: 45 positive responses were received, and 34 persons involved in counseling attended (Appendix B) in addition to Department of Vocational Education faculty members.

The scope of work of the seminar is illustrated in the printed program, "New and Emerging Occupations: Opportunities for the Disadvantaged, A Seminar for Vocational Guidance and Counseling" (Appendix C). The workshop featured:

1.0 Opportunities and requirements for workers in new and emerging occupations, including those occupations indicated by the Pennsylvania Office of Employment Security as "new-worker" growth areas: "Opportunities in the Changing World of Work."

2.0 "Problems and Challenges in Serving the Disadvantaged Student," which featured motivational techniques to help students overcome negative feelings about themselves and their place in the world of work (i.e., techniques to promote growth and support), as presented by the Urban League of Pittsburgh.

3.0 "Providing Career Awareness and Support Services for Disadvantaged Students," presented by the Pittsburgh Board of Public Education and also featuring prerequisite and concurrent (with occupational training) academic skills important to success in vocational education (Appendix D,"Criteria for Special Needs Students," Pittsburgh Public Schools).

4.0 Testing and measurement techniques (student assessment) to assure that (1) the student's vocational education program choice meets his/her interest and aptitudes, and (2) academic and personal support is provided to upgrade the disadvantaged student toward a reasonable chance for success in the vocational program and occupation of his/her choice. ("Assessment of the Disadvantaged Student," Associated Educational Consultants, Inc.; and "Establishing and Maintaining a Program of Articulation and Coordination," which was a question-answer segment led by representatives of the Pittsburgh Board of Public Education and Associated Educational Consultants, Inc.)

5.0 Handouts, as well as presentations, were prepared to help the vocational guidance and counseling personnel to:

5.1 Recognize the changing nature of work (new and emerging occupational areas);

5.2 Interpret labor market information, as it relates to students and to available training (articulation with vocational education);

5.3 Understand the scope of vocational education in general and of specific vocational programs;

5.4 Understand vocational/occupational terminology, including

- occupational definitions (D.O.T. codes, etc.) and competencies
- cluster training, career ladders, and other vocational concepts and practices (e.g., task analysis and task sequencing as related to individualized instruction);

5.5 Provide articulated (with vocational educators) guidance for the disadvantaged student.

Key materials disseminated at the workshop included:

1. "Definition and Characteristics of Disadvantaged Learners" (Appendix E)
2. "Use of the Guide in Career Exploration" (Appendix F)
3. "Analyzing Occupations" (Appendix G)

6.0 A hands-on activity was developed for the workshop: "Occupational Perceptions" (Appendix H) gave participants the opportunity to work in small groups to apply their knowledge and perceptions regarding demand occupations in their schools' service areas, level of training required, and aptitudes required by the occupation, particularly in regard to academically disadvantaged students. Page 2 of "Occupational Perceptions" offered a worksheet that could be used as a counseling aid in the school setting.

At the conclusion of the workshop, participants were asked to complete an "Exit Evaluation" (Appendix I), which included a product evaluation, a process evaluation, a summary evaluation, and comments/recommendations for future seminars. Responses are summarized in Appendix J.

Follow-up letters to presenters were sent to express appreciation. Copies of the follow-up correspondence are shown in Appendix K.

V. ANALYSIS

As shown in Appendix J. "Summary of Responses, Exit Evaluation," the 25 respondents gave positive responses overall to all sections of the evaluation.

VI. CONCLUSIONS AND RECOMMENDATIONS

According to reactions and verbal comments of participants, this type of workshop is needed--and welcomed--by persons responsible for vocational guidance of disadvantaged students. Future efforts might include in-depth information on correlating aptitudes and other assessment results for guidance in vocational program selection, with corresponding emphasis on sex equity.

VII. DISSEMINATION

Copies of materials disseminated at the workshop are on file in the Department of Vocational Education, University of Pittsburgh. The financial report of this project will be filed under separate cover by the University of Pittsburgh Office of Research Accounting.

APPENDICES

APPENDIX A.1

University of Pittsburgh

November 1, 1983

Dear Counselors:

The Department of Vocational Education of the University of Pittsburgh is attempting to respond to a current need expressed by many Guidance and Counseling people. That is, how do students who are academically or socio-economically disadvantaged fit into vocational training programs? And, beyond that, what opportunities are out there for them once they leave school? What kinds of help can you, as a Counselor, provide for disadvantaged students as they prepare to enter a tight labor market?

To help answer some of your questions, the Department of Vocational Education will present a one-day seminar for Guidance and Counseling personnel. Beginning at 8:30 a.m. and continuing until 2:30 p.m. on Friday, December 9, 1983, this seminar will give you the opportunity to discuss issues that affect your students. Presentations regarding occupational opportunities for the disadvantaged, occupational assessment and placement systems, and counseling and academic support techniques have been planned with your students in mind.

Enclosed is a copy of the tentative agenda, along with a map and a reservation form. We would appreciate your help: please return the reservation form by November 30.

We look forward to meeting you at this Seminar for Vocational Guidance and Counseling: New and Emerging Occupations - Opportunities for the Disadvantaged.

Sincerely,

Irwin H. Iwler, Ed.D.
Director, Department of Vocational Education

Ona Kay Kinter, Ph.D.
Coordinator, Workshops and Seminars

IHI/hjm

Enclosures

UNIVERSITY OF PITTSBURGH
DEPARTMENT OF VOCATIONAL EDUCATION

NEW AND EMERGING OCCUPATIONS: OPPORTUNITIES FOR THE DISADVANTAGED
A Seminar for Vocational Guidance and Counseling

Friday, December 9, 1983

SCHOOL NAME_____

SCHOOL ADDRESS_____

_____

☐ Yes, I/we will attend

Name(s)	Title(s)	School Phone(s)

☐ No, no one from our school will be able to attend.

Return registration form by November 30, 1983 to

Dr. Ona Kay Kinter
Department of Vocational Education
4M31 Forbes Quad
University of Pittsburgh
Pittsburgh, PA 15260

TENTATIVE AGENDA

UNIVERSITY OF PITTSBURGH
DEPARTMENT OF VOCATIONAL EDUCATION

NEW AND EMERGING OCCUPATIONS: OPPORTUNITIES FOR THE DISADVANTAGED
A Seminar for Vocational Guidance and Counseling

Friday, December 9, 1983

5J10 Forbes Quadrangle

8:30 Registration/Coffee

9:00 OPPORTUNITIES IN THE CHANGING WORLD OF WORK:
- New and Emerging Occupations, with emphasis on Opportunities for the Disadvantaged

10:15 PROBLEMS AND CHALLENGES IN SERVING THE DISADVANTAGED STUDENT:
- Relationship Between Academic Preparation and Support and Vocational Education
- Motivational Techniques

11:00 PROVIDING VOCATIONAL GUIDANCE, COUNSELING AND SUPPORT FOR DISADVANTAGED STUDENTS

11:30 Lunch

12:30 ASSESSMENT OF THE DISADVANTAGED STUDENT:
- Occupational Interests and Aptitudes
- Academically-Related Assessment and Support
- Personal Support Systems

2:00 ESTABLISHING AND MAINTAINING A PROGRAM OF ARTICULATED COORDINATION:
- Guidance/Counseling Personnel and Disadvantaged Vocational Students
- Guidance/Counseling Personnel and Vocational Educators

2:30 Wrap-up/Evaluation

UNIVERSITY OF PITTSBURGH
DEPARTMENT OF VOCATIONAL EDUCATION

APPENDIX B

NEW AND EMERGING OCCUPATIONS: OPPORTUNITIES FOR THE DISADVANTAGED
A SEMINAR FOR VOCATIONAL GUIDANCE AND COUNSELING

FRIDAY, DECEMBER 9, 1983

PARTICIPANTS

Darla J. Glantz
A. W. Beattie Vo-Tech

John Chakot
Marion Center H.S.

Tom Phillips
McDowell H.S.

Albert L. Ragazzini
Ambridge Area H.S.

Aldora Frazier
Langley H.S.

Richard Colliver
Somerset Area

Charles Tea
Hampton H.S.

Walter Weaver
Brashear H.S.

William Bochicchio
Schenley H.S.

Marian Golob
Carrick H.S.

Tony Indovina
Shaler Area Sr. H.S.

Fred A. Monaco
Pgh. Public Schools

Lois Groomes
Churchill H.S.

Stephen Harris
Bethel Park H.S.

Larry Montgomery
W. Mifflin North

Bill Haddox
S. Side Area School Dist.

Jim Mewhirter
Penn Hills

George Schubert
Taylor Allderdice H.S.

Deborah M. Madden
Thomas Jefferson H.S.

David Stillings
McDowell H.S.

Joan Dore
Oliver H.S.

Jacqueline Galloway
Dilworth Academy

Carol Kemp
Somerset Area

William Means
Oliver H.S.

Yvonne Blyshak
South High

Jeanne Dix
Brashear H.S.

Richard Dull
Southmoreland H.S.

William Green
Pgh Public Schools

Carole Nichols
Gateway H.S.

H. R. Domyslawski
Shaler Area Int. H.S.

Debbie Kelly
Peters Twp. H.S.

Sheryl Chewning
S. Side Area School Dist.

Joseph Heckel
Mars H.S.

T. Wayne King
Warren Area H.S.

APPENDIX C

NEW AND EMERGING OCCUPATIONS:

OPPORTUNITIES FOR THE DISADVANTAGED

A SEMINAR FOR
VOCATIONAL GUIDANCE AND COUNSELING

UNIVERSITY OF PITTSBURGH
DEPARTMENT OF VOCATIONAL EDUCATION
AND
PENNSYLVANIA DEPARTMENT OF EDUCATION
BUREAU OF VOCATIONAL EDUCATION

DECEMBER 9, 1983

5J10 FORBES QUADRANGLE
UNIVERSITY OF PITTSBURGH

University of Pittsburgh D
Pennsylvania Department of Edu

Decem

NEW AND EMERGING OCCUPATIONS:
A Seminar for Vocati

8:30 - 9:00	Coffee and Registration
9:00 - 9:10	WELCOME AND INTRODUCTIONS Dr. Irvin H. Iwler Director, Department of Vocational Education Ms. Clara Lea Gaston Consultant, Handicapped & Disadvantaged Programs PDE-BVE
9:10 - 10:00	OPPORTUNITIES IN THE CHANGING WORLD OF Ms. Charlene McAbee Employment Security Specialist Office of Employment & Security Region 6
10:00 - 10:45	PROBLEMS AND CHALLENGES IN SERVING THE DISADVANTAGED STUDENT Ms. Susan Downs Pettigrew Education Specialist Urban League of Pittsburgh
10:45 - 10:50	(Stretch break)

t of Vocational Education
Bureau of Vocational Education

1983

RTUNITIES FOR THE DISADVANTAGED
uidance and Counseling

10:50 - 11:30	PROVIDING CAREER AWARENESS AND SUPPORT SERVICES FOR DISADVANTAGED STUDENTS Mr. Fred A. Monaco Manager, Career Development Student Placement Section Pittsburgh Board of Public Education
11:30 - 12:30	Lunch (4D56 Forbes Quadrangle)
12:30 - 1:55	ASSESSMENT OF THE DISADVANTAGED STUDENT Dr. John G. Drugo Director, Research and Evaluation Associated Educational Consultants, Inc.
1:55 - 2:00	(Stretch break)
2:00 - 2:30	ESTABLISHING AND MAINTAINING A PROGRAM OF ARTICULATION AND COORDINATION Mr. Fred A. Monaco Dr. John G. Drugo
2:30 - 2:40	Wrap-up and Evaluation

WORKSHOP PLANNING COMMITTEE

Dr. Irvin H. Iwler	Director Department of Vocational Education University of Pittsburgh
Dr. Ona Kay Kinter	Coordinator, Workshops Department of Vocational Education University of Pittsburgh
Ms. Gayle J. Marco	Assistant Director Department of Vocational Education University of Pittsburgh

PITTSBURGH PUBLIC SCHOOLS APPENDIX D
DIVISION OF OCCUPATIONAL, VOCATIONAL, AND TECHNICAL EDUCATION
STUDENT PLACEMENT SECTION

NAME _____ SCHOOL _____ DATE _____

CRITERIA FOR SPECIAL NEED STUDENTS

IN SCHOOL

_____ shows little or no interest in school.
*_____ is often absent (approximately nine days per report period).
_____ may be academically "retarded."
*_____ poor grades (below C average).
_____ may be overage for grade level. (Example 18 and in the 10th grade.)
_____ hasn't adapted to, or been served by, mainstream educational programs.
_____ has experienced very limited, if any, academic or personal success.
*_____ rebels against authoritative figures.
*_____ may be ready to drop out of school.
_____ didn't select existing work/study vocational programs.
_____ has been nonresponsive to traditional methods in education.
_____ has short attention span.
_____ does not have "competencies" developed in vocational skill-centered courses.

OUT OF SCHOOL

*_____ known to Juvenile Court.
_____ has had difficulty with the law.
_____ lives in an economically depressed neighborhood.
_____ may have a maternally-dominated family (problems in identifying with a male figure).
_____ often lives with a grandparent or older siblings.
_____ lacks family influence and assistance to provide direction toward most aspects of achievement.
_____ has limited finances and material possessions.
_____ has a child.

IN GENERAL

_____ feels powerless to correct the situation.
_____ does not feel accepted as a person.
*_____ displays mistrust, hostility, poor basic academic skills, emotional problems, some degree of negativism and/or physical problems.
_____ withdrawal from overly demanding situations.
_____ relies on short-range goals based on immediate rewards, not allowing for planned resolution of problems.
_____ family and personal problems affect his/her ability to achieve.
_____ may rely on alcohol and/or drugs.
_____ problems with interpersonal relationships.
_____ has limited English-speaking ability.

*Indicates major criteria for selection.

I consider _____ a "Special Need Student" from the information I have obtained, and have initialed the applicable conditions.

_____
Field Service Aide

CONFIDENTIAL - This information is confidential.

BEST COPY AVAILABLE

APPENDIX E

DEFINITION AND CHARACTERISTICS OF DISADVANTAGED LEARNERS*

Definition:

The disadvantaged student should be thought of as a learner having special needs. Recognizing the problem areas and strengths of disadvantaged learners is a necessary first step to assessing, planning, and implementing vocational programs for these special needs students. Definitions and eligibility criteria for classifying students as disadvantaged are available from local, state and federal education agencies.

Disadvantaged learners are persons (other than handicapped persons) who have academic disadvantages, including persons who have limited English-speaking ability, and who require special services, assistance, or programs in order to enable them to succeed in (vocational education) programs. A vocational learner with an academic disadvantage is a person who:

(a) Lacks reading and writing skills,
(b) Lacks mathematical skills, and/or
(c) Performs below grade level.

Academically disadvantaged students may be characterized by:

(a) Level of performance or achievement in language arts and/or math,
(b) Poor attendance records,
(c) Average for grade placement,
(d) Suspension records and
(e) Failing grades in vocational education programs and/or required academic subjects.

Federal, state, and local guidelines define disadvantaged learners with emphasis on qualifying characteristics. Weak and problem areas should be identified so that special instruction may be provided. The following paragraphs describe criteria that suggest problems of disadvantaged learners. A specific disadvantaged learner may possess one or all of the criteria.

Academic characteristics and examples typical of disadvantaged learners are:

1. Lacks communication skills as exemplified in
   (a) Poor reading skills and limited formal vocabulary,
   (b) Poor writing skills, and/or
   (c) Poor oral communication skills.

*Adapted from: Cheryl W. Steczak. A Module for Teaching Disadvantaged Students in Vocational Education. Indianapolis: Indiana State Department of Vocational Education, 1980.

2. Lacks mathematical skills as exemplified in
   (a) Serious difficulties in comprehending computational comments and/or
   (b) Insufficient computational skill to compete effectively with peers.

3. Performs below grade level as exemplified in
   (a) Reading level at least two grades below grade placement
   (b) Mathematical level at least two grades below grade placement,
   (c) Over age for grade by at least two years,
   (d) Low achievement scores and/or
   (e) Underachievement

Disadvantaged students may be further hampered by any of the following:

1. Family income is at or below national poverty level resulting in
   (a) Family funds that are insufficient to meet the needs of today's society and/or
   (b) A major effort is expended in acquiring food, clothing and shelter for survival

2. Comes from an environment that is detrimental to self-growth as a result of
   (a) Being transient/migrant,
   (b) Living in a broken home or a home where there is no male authority figure and/or
   (c) Lacking encouragement in the home to pursue educational activities

3. Exhibits poor health characteristics as a result of
   (a) Improper nutrition and/or
   (b) Improper personal hygiene

Other characteristics or factors may affect learning. Along with problem areas, the learner's strengths should be identified. The following paragraphs describe both problems and strengths that may affect a disadvantaged student's learning.

Attendance. The disadvantaged student has frequently had a history of poor attendance. When in attendance at school, the learner may not be punctual for classes or even attend all classes. However, the disadvantaged learner often improves in school attendance when confronted with employability requirements and the opportunity to participate in work experience programs.

Attitudes. In general, a negative attitude toward learning, exhibited as an indifferent and passive role, is taken in the classroom. Schools are filled with bulletin boards, textbooks, films, teachers, administrators, secretaries, etc., which allow the average "middle class" Americans of all races and religions to feel at ease within the environment. Many disadvantaged pupils do not feel they are average Americans and do not identify or model themselves after those examples set forth

in the educational setting. Administrators and teachers must provide models with which the disadvantaged or minority students can identify. Teachers, aides, bulletin boards, textbooks that are representative of the culture of the disadvantaged student are necessary in the school setting. It may take more effort on the part of the educators, but providing models and a more motivating environment for disadvantaged pupils will reap benefits.

Authority. Characteristic of many disadvantaged students is a history of delinquency and a rebellion against authority. The student may defy rules, be suspicious of teachers, reject supervision, and be overly sensitive to constructive criticism. If the educator -- counselor or teacher -- recognizes and is sensitive to the disadvantaged student's needs, strong personal relationships could develop a positive atmosphere for learning.

Goals. Disadvantaged learners tend to have low levels of aspiration and inability to define and solve problems. Difficulty is exhibited with understanding the relationship of school experiences to long-range life goals. Disadvantaged pupils are often not likely to be concerned with higher order needs. On the positive side, the disadvantaged learner will work toward the achievement of employability skills when personnel interested in his/her vocational development assist the setting of realistic, performance-based objectives.

Image. A negative self-image and a lack of self-confidence is often reflected as a result of continual failure. Apprehensiveness may occur when new learning/training settings are entered. Furthermore, outward defensive verbal expressions may be exhibited. On the other hand, disadvantaged learners often tend to express their feelings openly and honestly. These individuals have also shown a willingness to learn when the practical value of the content has been clarified.

Learning Styles. A disadvantaged learner often (a) becomes bored easily, (b) has a short attention span and (c) cannot relate current instruction to previous learning. However, learning does occur when the student's basic needs are satisfied, instruction is structured and organized, real and concrete experiences are provided, a multisensory approach is used, and active involvement in the learning activities is encouraged.

Manual Dexterity. Due to a lack of tools in the home environment, disadvantaged students may have difficulty in coordination, in manipulation of small objects and tools, and/or placing and turning movements with hands. However, disadvantaged students are generally very visual-and physical-orientated.

Social Relations. The disadvantaged student may demonstrate antisocial and anti-school behaviors by associating with socially deviant groups. Acceptance by other individuals is often rejected. Positive attributes include the cooperativeness and mutual aid provided by families of many of the disadvantaged.

Disadvantaged Learner Analysis Profile

Assessment of a disadvantaged student should result in a detailed description of the learner's strengths, weaknesses, interest, and preferences. A learner analysis profile provides the vocational teacher and other cooperative team members with a concise, graphic representation of previously gathered identification and assessment information.

The purpose of this section is to: (a) identify the criteria for describing basic cognitive, affective, and psychomotor behaviors and (b) guide the development of a learner analysis profile for a disadvantaged learner.

Developing a Learner Analysis Profile

A learner analysis profile is designed to display diagnostic information. The vocational teacher should cooperate with other educational personnel in developing the graphic representation of the disadvantaged learner's behaviors. This activity is a final step in the identification and assessment process and an initial step in planning a specific vocational learner's instructional program.

Procedures for Developing a Learner Analysis Profile

First, review the criteria used to describe the disadvantaged learner's behaviors. These criteria are divided into three major categories:

Cognitive Behavior. This category involves the learner's thinking or intellectual abilities. The learner may recall, comprehend, apply, analyze, synthesize, or evaluate knowledge. Four skill areas of cognitive behavior are: verbal, language, information, and quantitative/numerical.

Psychomotor Behavior. This category consists of the learner's perceptual and manipulative motor skills. The vocational learner behavior ranges from perceiving a work situation through the senses to performing manipulative skills with proficiency to creating muscular movements that accommodate new problematic situations. Two areas of psychomotor behavior are: perceptual skills and physical skills.

Affective Behavior. This category includes the learner's internalization of feelings and beliefs. Characteristics of the behavior are interests, habits, values, emotions, and attitudes. Three areas of affective behavior are: social habits, occupational interests and capabilities, and learning styles and preferences.

Major areas within the cognitive, psychomotor and affective behavior categories and the elements for each area are defined in "Criteria for Developing a Learner Analysis Profile" (Attachment A).

Second, cooperate with members of the instructional team in developing the profile. Assessment information, observation reports, and other pertinent data from all cooperative team members should be taken into consideration. Team involvement results in a comprehensive learner description, which provides a common base for all instructional development.

Third, rate the learning criteria for the disadvantaged (vocational) learner. Consensus of the team is necessary for each criterion. The "Learner Analysis Profile" (Attachment B) includes a five-step rating scale, which ranges from "learning weakness" (1) to "learning strength" (5). A criterion for which the student does not exhibit a weakness or strength should be rated in the middle (3). When the rating is completed, the marks can be connected to provide a profile of the student's learning needs and learning style.

Fourth, document each rating made on the "Learner Analysis Profile"[1] (Attachment B). Specific documentary information should be available through diagnostic assessment and on the "Case History Record." The documentary information should describe the specific behavior of the student and/or the source of data. Remarks should be: (a) clear and concise, (b) objective, (c) verifiable through documentation, (d) free of libelous terms, and (e) limited to repeatable behaviors.

The Learner Analysis Profile is an important tool for planning and evaluating. To insure its accuracy and useability, the profile should include current information and suggestions for classroom use. Another sample of a rating scale of vocational strengths for the disadvantaged learner is included in Attachment C, "Disadvantaged Learner Characteristics Rating Scale[2]."

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[1] "Learner Analysis Profile." Phelps, L.A., Instructional Development for Special Needs Learners: An Inservice Resource Guide. Urbana: University of Illinois, 1975.

[2] "Disadvantaged Learner Analysis Rating Scale." Gemmill, Perry. Department of Industrial Education, University of Maryland, 1979.

ATTACHMENT A

CRITERIA FOR DEVELOPING A LEARNER ANALYSIS PROFILE

Major Areas and Definitions

Major Area	Definition
Cognitive Behavior	
Verbal Skills	Involves the ability to communicate in written and spoken forms.
Language Skills	Involves the ability to listen, understand, and express one's self using written and oral forms of language.
Informational Skills	Involves the ability to follow instructions, remember, sequence information, plan, organize and make decisions.
Quantitative/Numerical Skills	Involves the ability to count, record, perform basic arithmetic processes, measure and otherwise use or manipulate numerical information.
Psychomotor Behavior	
Perceptual Skills	Involves the ability to accurately perceive colors, forms, space, sounds and odors.
Physical Skills	Involves the ability to coordinate and perform physical movements.
Affective Behavior	
Social Habits	Involves the ability to interact with others and act independently in an acceptable manner.
Occupational Interests and Capabilities	Involves the ability to determine one's occupational likes and dislikes and to adjust to changing work situations.
Learning Styles and Preferences	Involves the environmental, emotional sociological and physical factors that influence learning.

Adapted from: Dunn, R. and Dunn, K. Educator's Self-Teaching Guide to Individualizing Instructional Programs. West Nyack, New York: Parker Publishing Co., Inc., 1975; and Phelps, L.A. Instructional Development for Special Needs Learners: An Inservice Resource Guide. Urbana: University of Illinois, 1975.

ATTACHMENT B

LEARNER ANALYSIS PROFILE

Directions: Read the definition for each learning criterion in Supplementary Section I, Criteria for Developing a Learner Analysis Profile. Then rate each criterion on the profile by placing a dot in the appropriate box. The rating scale ranges from 1-5 indicating learning weaknesses and learning strengths. A rating of 3 indicates no specific weakness or strength. When all areas have been rated, connect the dots with a solid line to provide a graphic representation of the student's learning needs and learning style. As you are rating the student, briefly record the documentary evidence or specific behavior.

1 = Severe weakness
2 = Moderate weakness
3 = Neutral; no strength or weakness
4 = Moderate strength
5 = Outstanding strength

Student's Name_____ Age_____ Date of Birth_____

Name of School _____ Program_____ Grade Placement_____

Date of Profile_____ Names of Cooperative Team Members:

Name	Title

"Learner Analysis Profile." Phelps, L.A., Instructional Development for Special Needs Learners: An Inservice Resource Guide. Urbana: University of Illinois, 1975.

LEARNER ANALYSIS PROFILE

Criteria	Learning Weakness 1	2	3	4	Learning Strength 5	Documentation/Observed Behavior
A. COGNITIVE BEHAVIOR						
1. Verbal Skills						
Reading						
Spelling						
Recording information						
Verbal communication						
Written communication						
Other verbal skills						
2. Language Skills						
Listening						
Grammatical expression						
Technical vocabulary						
Nonverbal expression						
Other language skills						
3. Informational Skills						
Retention						
Sequence						
Attentiveness						
Planning ability						
Mechanical aptitude						
Transfer						
Other informational skills						
4. Quantitative/Numerical Skills						
Counting and Recording						
Addition/subtraction						
Multiplication/division						
Measuring						
General number use						
Money						
Other quantitative/numerical skills						

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LEARNER ANALYSIS PROFILE

Criteria	Learning Weakness			Learning Strength		Documentation/Observed Behavior
	1	2	3	4	5	
B. PSYCHOMOTOR BEHAVIOR						
1. Perceptual Skills						
Auditory discrimination						
Form perception						
Form discrimination						
Space perception						
Color perception						
Touch discrimination						
Other perceptual skills						
2. Physical Skills						
Physical strength						
Hand-eye coordination						
Manual dexterity						
Mobility						
Other physical skills						
C. AFFECTIVE BEHAVIOR						
1. Social Habits						
Sociability						
Sensitivity						
Cooperativeness						
Responsibility						
Conformity						
Loyalty						
Safety						
Other social habits						

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Criteria	Learning Weakness 1	2	3	4	5 Learning Strength	Documentation/Observed Behavior
C. AFFECTIVE BEHAVIOR (continued)						
Work Adjustment Capabilities When:						
Duty changes are frequent						
Specific tasks are assigned						
Working apart from others						
Stressful, unexpected, risk situations						
Making decisions/judgments on subjective criteria						
End result is tangible						
End result is intangible						
2. Learning Styles/Preferences						
Environment						
Motivation						
Persistence						
Responsibility						
Structure						
Social						
Sensory response						
Nutritional intake						
Work time						
Mobility						
Other styles and preferences						

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LEARNER ANALYSIS PROFILE

Criteria	Learning Weakness 1	2	3	4	Learning Strength 5	Documentation/Observed Behavior
C. AFFECTIVE BEHAVIOR (continued)						
3. Occupational Interests and Capabilities						
a. Vocational Education in:						
Agriculture/Agri-Business						
Natural Resources and Environment						
Construction						
Manufacturing						
Transportation						
Communication and Media						
Product Services/Mechanics/ Repairers						
Marketing and Distribution						
Business and Office						
Personal Services						
Hospitality and Recreation						
Consumer and Home Economics						
Health						
Public Service						
Marine Science						
b. Occupational Desires that:						
Involve things and objects						
Are routine and concrete						
Involve people and interpersonal communication						
Are scientific or technical are abstract or creative						
Involve processes and machines						

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ATTACHMENT C

DISADVANTAGED LEARNER CHARACTERISTICS RATING SCALE

Directions: Observe the learner who appears to be disadvantaged. Then rate each criterion to indicate the amount of influence on success in the vocational program. Circle a number for each criterion according to the following:

1 = Disadvantage that interferes with success in vocational program
2 = Disadvantage that does not prevent success in vocational program
3 = Not applicable, neither a disadvantage nor a strength
4 = Strength that moderately encourages success in vocational program
5 = Strength that promotes success in vocational program

Additional comments may be written at the end of rating scale.

	Disadvantage				Strength
A. READING (Reading ability and formal vocabulary)					
1. Reading vocabulary	1	2	3	4	5
2. Reading speed	1	2	3	4	5
3. Comprehension of written lesson	1	2	3	4	5
4. Understanding of lesson vocabulary definitions	1	2	3	4	5
5. Grade level of reading	1	2	3	4	5
B. WRITING (Written communication)					
1. Expression of thoughts in writing	1	2	3	4	5
2. Construction of a sentence	1	2	3	4	5
C. SPEAKING (Oral communication)					
1. Pronunciation of words	1	2	3	4	5
2. Length of responses to questions	1	2	3	4	5
3. Willingness to speak	1	2	3	4	5
4. Use of formal language	1	2	3	4	5
5. Transition from native language to English	1	2	3	4	5
D. COMPUTING (Mathematical skills)					
1. Recognition of mathematical symbols	1	2	3	4	5
2. Comprehension of computational comments	1	2	3	4	5
3. Performance of simple math	1	2	3	4	5
4. Application of mathematical formulas to classroom (vocational) problems	1	2	3	4	5
5. Grade level of computing	1	2	3	4	5

ADAPTED FROM:
"Disadvantaged Learner Analysis Profile." Gemmill, Perry. Department of Industrial Education, University of Maryland, 1979.

	Disadvantage				Strength
E. GENERAL ACHIEVEMENT (Grade level of performance)					
1. Relationship of age to grade	1	2	3	4	5
2. Level of achievement scores	1	2	3	4	5
F. ATTENDANCE (Absenteeism)					
1. Amount of absenteeism	1	2	3	4	5
2. Punctuality to classes	1	2	3	4	5
G. ATTITUDE (Learning values)					
1. Interest in learning and school work	1	2	3	4	5
2. Role in class	1	2	3	4	5
3. Personality habits	1	2	3	4	5
4. Awareness of educational procedures and opportunities	1	2	3	4	5
5. Achievement of simple tasks	1	2	3	4	5
6. Acceptance of responsibility	1	2	3	4	5
H. AUTHORITY (Relationships with authority figures)					
1. Rapport with teachers	1	2	3	4	5
2. Rapport with school administrators and supervisors	1	2	3	4	5
3. Rapport with employers	1	2	3	4	5
I. GOALS (Short and long term objectives)					
1. Level of aspiration	1	2	3	4	5
2. Understanding of relationship between school and long-range goals	1	2	3	4	5
3. Problem solving skills	1	2	3	4	5
4. Preference for high and low risks	1	2	3	4	5
5. Perseverance in achieving goals	1	2	3	4	5
6. Achievement of performance based objectives	1	2	3	4	5
J. IMAGE (Self-image and self-concept)					
1. Self-confidence	1	2	3	4	5
2. Expression of feelings	1	2	3	4	5
3. Willingness to learn	1	2	3	4	5

E.9

Disadvantaged Learner Characteristics Rating Scale

	Disadvantage				Strength
K. LEARNING STYLE (Avenues for learning)					
1. Attention span	1	2	3	4	5
2. Transfer of knowledge and skills	1	2	3	4	5
3. Responds to structure and organization					
4. Learns through real and concrete experiences	1	2	3	4	5
5. Learns by doing	1	2	3	4	5
L. MANUAL DEXTERITY (Proficiency in manipulating)					
1. Coordination	1	2	3	4	5
2. Manipulation of small objects and tools	1	2	3	4	5
3. Performance of placing and turning movements with hands	1	2	3	4	5
4. Visual and physical orientation	1	2	3	4	5
M. SOCIAL RELATIONS (Social behavior)					
1. Association with peer groups	1	2	3	4	5
2. Relationships with adults	1	2	3	4	5
3. Cooperativeness of family members	1	2	3	4	5
4. Social values	1	2	3	4	5

COMMENTS: _____

From: Guide for Occupational Exploration. U.S. Department of Labor, Employment and Training Administration, 1979. (For Sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402; $12.00) APPENDIX F

II. Use of the Guide in Career Exploration

An essential ingredient of vocational counseling is occupational and labor market information. Although the counseling process involves far more than providing such information, any instrument that organizes the world of work and provides information about occupational duties and requirements is valuable both to the counselor and to the counselee. Because vocational counseling services are not available to large numbers of potential counselees, the *Guide* is intended to help such persons make more informed vocational decisions than they might otherwise.

In this section of the *Guide*, both the individual who must make occupational choices without benefit of vocational counseling and the vocational counselor who assists counselees are instructed in how to use the *Guide*.

Use by Individuals Without Counselor Assistance

If you need help in deciding what kind of work you should choose, you can use the *Guide* to help you plan your career or get ready to find a job: not just any job, but one you can do or learn to do and which will be satisfying to you.

Different people like, and are good at, different things. To find the job that is right for you, you need two kinds of information:

1. You need information about yourself. You need to know the kind of work you would like to do and whether you are able to do such work. If you can't do it now, can you learn to do it and is a training program available?
2. You need information about occupations that sound interesting to you. What does the worker do on such jobs? What knowledge and skills must the worker have? What training is required?

This *Guide* tells you about occupations that relate to your interests and abilities. When you have used it properly, you will be better prepared to plan your career or seek employment, whether you do so through your public employment service office, an employment agency, a school placement program, answers to want ads, or applications directly to employers. Taking the following steps, you will learn about many jobs, including some you never knew existed. You should then be able to decide what type of work you can do and will find satisfaction in doing.

STEP 1. THINK ABOUT YOUR INTERESTS

What kind of work would you most like to do? Did you know that all jobs in the world of work have been organized into groups according to the interests of the workers?

Some workers like to help others. Some would rather do mechanical work with their hands or tools. Others prefer artistic work, or writing, or selling, or clerical work. These are just a few examples. The *Guide for Occupational Exploration* has taken all jobs in the United States and organized them into 12 areas on the basis of worker interest. They are called Interest Areas. Each of these 12 interest areas has been given a name, a code number, and a brief description. You will find these on page 9 of the *Guide*.

In order to learn more about the relation of your interests to occupations, turn to page 8 of the *Guide* and read the titles and descriptions of each interest area. Select one or more areas you think you would like to explore.

STEP 2. SELECT ONE OR MORE WORK GROUPS TO EXPLORE

In order to know what work groups to explore, you need to decide whether you would find satisfaction in work activities such as those required by occupations in the group. To do this, turn to the Summary Listing of Interest Areas, Work Groups, and Subgroups on pages 9 – 12 in the *Guide*. Look up the page numbers for each interest area you selected in Step 1. Turn to that page and read the description of the area. Then read the titles of each work group within the area. Think about what you like to do and what you think you can do. The following information will help you select the work groups that interest you.

Many of the jobs listed in the interest areas you have selected may require knowledge and skills that you do not have or would have difficulty acquiring. There should be occupations in some of these areas, however, that fit your interests and that you can do or learn to do. The jobs in each Interest Area have been divided into groups of jobs having similar worker requirements. These are called work groups.

Some work groups are made up of jobs requiring little specialized training or experience. Jobs in these groups are open to nearly anyone who is willing to work. Other groups include jobs requiring special courses in school or special training or education after high school. For example, some jobs require knowledge of subjects such as physics or chemistry. Others require accuracy and speed in working difficult math problems. You must think about what courses you have taken in school, how well you did in those subjects, and whether or not you might like a job that uses such knowledge and skill. You also have to think about whether you might be able to get the necessary additional training.

The groups that require the most education, training, and experience are usually listed first among the work groups in most interest areas. For example, in Area 05, Mechanical, the first work group is 05.01, Engineering. Most jobs in this group require 4 or more years of college.

The last work group in this area is 05.12, Elemental Work, Mechanical. In this group, many jobs are open to workers who have little formal education. As you make

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your selection of work groups to explore, you need to think about the difficulty of the work involved in each group, and about the training and experience that are required.

When you have made your selection of work groups from the first interest area, follow this same process for any other areas you selected in Step 1.

STEP 3. EXPLORE THE WORK GROUPS YOU SELECTED

To explore a work group, look up its description in the *Guide for Occupational Exploration* and read it very carefully. As you read about a group, you may discover that it is not what you thought it would be and that you are not interested in it. Or you may find that the training requirements are more difficult than you want. If you find for any reason that you no longer want to consider the group, stop exploring it, and go on to the next group you wish to consider.

STEP 4. EXPLORE SUBGROUPS AND SPECIFIC OCCUPATIONS

Each work group in the *Guide* contains occupations that have been organized into subgroups.

Each subgroup is identified by a six-digit code and a title, and contains a list of all the occupations assigned to it.

After you have studied a work group description and decided that you are interested in considering it further, you should examine its subgroups to see if one or more of them appears to suit your interests and qualifications better than the others. If you need further information to help you decide, you should select one or more of the occupations in the subgroups and look them up in the *Dictionary of Occupational Titles*. You can do this by using the nine-digit DOT code, which is shown in the subgroups immediately following the title of each occupation.

Job definitions in the *Dictionary of Occupational Titles* (DOT) are listed in numerical order by DOT code. For example, to look up Editor, Film, you would look in the DOT under code 962.264–010, which is on page 930.

When you have completed your exploration of all groups that interest you and have identified subgroups, and possibly occupations of particular interest, you are in a position to organize the information you have collected. You can then make some decisions and plan your next steps.

STEP 5. GET IT ALL TOGETHER

Compare your present qualifications with those needed for the groups you are considering. You may have the training and experience necessary for immediate employment. On the other hand, you may have to make plans that include additional training or work experience at a lower level to help qualify you for the work of your choice.

At any rate, list those occupations or subgroups of occupations you are now interested in and think you can learn to do. Then plan to get training or a job.

If you still don't know what you should do, you can probably be helped by a vocational counselor or by a course or program designed for people who want assistance in vocational planning. If you are a student, you should arrange to meet with your school counselor, who can help you personally or tell you about any special programs available. If you are already in contact with a specialized agency such as the Bureau of Vocational Rehabilitation, a halfway house, or a CETA program, the counselor or caseworker in that program should be able to help you or refer you to someone who can.

If you are completely on your own, you should try to locate a private or public organization that offers vocational guidance services. Your library can probably help you identify such organizations. One such agency, which should be able to give you both employment counseling and job placement service, is the local office of the State employment service.

Use by Vocational Counselors

The counselor who assists individuals to choose a suitable occupational or vocational goal may function in any of a variety of settings—the school, the college, the public employment service, the private employment service, the vocational rehabilitation agency, or the community or private vocational guidance center.

In virtually every setting in which such counselors operate, they wish to help the individual evaluate his or her occupational interests, skills, and potentials, relate them to occupational requirements and opportunities, and arrive at a suitable occupational goal and a plan for achieving it.

To assist the counselee in this analysis, the counselor uses various tools and sources of information. The counselor helps the applicant or client to analyze his or her work experience (regular, casual, part-time, summer, military), education and training, voluntary and leisure-time activities, and other relevant experiences that may provide evidence of occupational preferences, skills, and potentialities. The counselor may administer or arrange for the administration of interest inventories or check lists, aptitude tests such as the USES General Aptitude Test Battery, and other tests and inventories.

Employment or vocational counseling, however, cannot be effective if it is limited to information about the counselee. Information is necessary about the world of work, to which the knowledge acquired about the individual can be related in arriving at a suitable occupational choice.

For some time now, the counselor has had available sources of occupational information, published by the Department of Labor, such as the *Occupational Outlook Handbook*, the *Occupational Outlook Quarterly*, the *Job Guide for Young Workers*, *Occupations in Demand at Job Service Offices*, and the *Dictionary of Occupational Titles*, as well as State occupational guides and labor market area reports

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prepared by State employment security agencies. These and similar publications provided useful information about labor market trends and opportunities and descriptions of occupations. However, a practical grouping of jobs in terms of occupational interest and work requirements was lacking.

The *Guide for Occupational Exploration* fills this longfelt need of vocational counselors. The thousands of occupations in the world of work are grouped by interests and by traits required for successful performance. The *Guide* provides a convenient crossover from information about the counselee to potentially suitable fields of work.

ROLE OF GUIDE IN COUNSELING AND GUIDANCE

The *Guide for Occupational Exploration* provides a clustering of occupations into fields of work within each major interest area—broad fields (through four-digit groups) and narrower fields (through six-digit subgroups)—which the counselor and counselee can explore and to which they can relate occupationally significant information about the counselee. Rather than attempting to explore the entire world of work, the counselor and counselee can identify those areas of work in which the counselee has the strongest interest and, within the interest areas, those work groups that are most closely related to the interests, skills, aptitudes, education and training, and physical abilities of the counselee.

The *Guide* may be used particularly (1) to give the counselee an overview of the world of work and thus widen his or her understanding of occupations and (2) to help the counselee determine his or her occupational goal by offering a choice of fields of work and occupations that best reflect the interests, abilities, and potentials of the counselee.

TIE-IN WITH THE GENERAL APTITUDE TEST BATTERY (GATB)

The *Guide* joins the General Aptitude Test Battery (GATB) and the forthcoming Interest Inventory and revised Interest Check List to form a coordinated assessment-occupational exploration system developed by the USES for use in the counseling process. To facilitate use of GATB results with the *Guide*, a new set of Occupational Aptitude Patterns (OAP's) has been developed based on work groups in the *Guide*. (The new OAP's are scheduled for publication soon.)

USE OF THE GUIDE IN THE COUNSELING PROCESS

The *Guide* may be used at any point in the counseling process: (1) to enable the counselee to obtain a better understanding of the variety of interest areas and fields of work that constitute the world of work and (2) to assist the counselee to explore areas of interest, fields of work, and specific occupations in order to identify occupational groups and specific jobs that are most in line with the counselee's interests, abilities, and potentials.

Widening Understanding of World of Work

If the counselee's experience and understanding of the world of work is limited, it will be desirable for him or her, during the early stages of the counseling process, to obtain an overview of the various interest areas and work groups covered in the *Guide*. The *Guide* lists 12 Interest Areas, 66 Work Groups, and 348 subgroups.

The counselor may review these sections with the counselee or suggest that the counselee review them independently, to become generally familiar with the various interest areas and with the work groups covered in each area, especially in those areas in which he or she has a particular interest. If the counselee wishes to know more about an interest area or work group, there are brief descriptions at the beginning of the interest area and of the work group starting on page 13 in the *Guide*.

This overview should be helpful not only in giving the counselee an overall "feel" of the world of work but also in providing a background against which to relate elements in his or her work experience, education and training, leisure time activities, and other experiences that point to possible suitable fields of work and occupations in the analysis that takes place during the course of the counseling process.

Determining Occupational Goal

During the counseling process, the counselor assists the counselee to choose an occupational field that best represents the counselee's interests, skills, and potential abilities, and that offers opportunity for employment. Analysis of occupationally related experiences, application of aptitude and interest tests, and relation of the resulting information to occupational groupings in the *Guide for Occupational Exploration* are major steps in this process.

Analysis of Occupationally Related Experiences. The counselor assists the counselee to analyze occupationally related experiences that may indicate his or her true occupational interests, aptitudes, acquired skills, personal traits, and any environmental and financial factors that may have vocational significance. Thus, the counselor explores with the counselee past work history, school courses, leisure-time activities, hobbies, voluntary activities, and other experiences for indications of kinds of work the counselee particularly liked and seemed to do well in and those he or she disliked or did poorly in. Out of this analysis will emerge indications of types of work to consider seriously or to avoid.

The overview of the world of work, seen through the *Guide* as suggested above, when received early in the counseling process, will provide an occupational information base that will be useful in analyzing past experiences for occupationally significant elements.

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Aptitude and Interest Testing

In addition to obtaining information about the counselee's background during the counseling interview, the counselor will often administer, or arrange for administration of, the USES Interest Inventory or Interest Check List and/or the General Aptitude Test Battery (GATB) or other tests for further indications of interests and potential ability.

The USES Interest Inventory (to be published in 1979) will provide formal measures of occupational interests that can be related directly to the Interest Areas in the *Guide*. Meanwhile, a newly revised Interest Check List will give helpful information on occupational interests of the counselee and a tie-in with the *Guide* because the results will relate directly to the work groups in the *Guide*.

The occupational preferences that derive from the interview(s) and the use of the interest tools will serve as entries to the 12 Interest Areas in the *Guide for Occupational Exploration*. The GATB results can also serve as entries to the *Guide* because the new OAP structure will relate directly to occupational groups in the *Guide*.

Use of Guide in Determining Occupational Goal

After occupationally significant information is obtained about the counselee through the counseling interview(s) and the use of the various tools, the counselor and the counselee can use the *Guide* to explore fields of work and to help the counselee select a suitable occupational goal.

Steps suggested in this process are the following:

STEP 1. HELP THE COUNSELEE IDENTIFY AREAS TO BE CONSIDERED

The information obtained about the counselee will reveal broad areas of particular interest to him or her. A list of these Interest Areas may be made to insure exploration of all pertinent areas. The counselee should be encouraged to read the description of the selected areas to verify further the relevance of his or her interests. A review may also be made of the descriptions of other interest areas for the possible identification of further areas to be explored.

STEP 2. HELP THE COUNSELEE SELECT AND EXPLORE WORK GROUPS

When interest areas to explore further are chosen, the client may review the description of all work groups (indicated by four-digit code) within these interest areas to help decide which work groups to explore. Sometimes a glance at the work group title may be enough to identify a type of activity the client does not wish to investigate further. The counselee may then return to each group selected for further exploration. Alternatively, as the counselee reads a group title and description and expresses interest in the work group, he or she may explore it immediately, before moving on to the next work group.

In exploring the work group, the counselor should help the counselee determine the suitability of the group from the standpoint of his or her true interests, aptitudes, skills and traits required, further preparation needed, and other relevant considerations.

To explore each selected work group, it is suggested that the counselee review each of the five items under the work group description. During the course of discussion of each item, the counselor should help the counselee try to relate occupationally significant information known about the counselee to the information in the item.

The first item, *"What kind of work would you do?"* provides examples of *types of work activities* included in the group, for example, "Write dialogue for television program" and "Set up and operate a lathe." These examples, along with the description of the work group, will help the counselee to get a "feel" of the kind of work involved and to determine then if it is a type of activity in line with his or her interests, skills, and potentials. These activities do not apply to a single occupation but are illustrative of the kind of work performed in various jobs in this group.

The second item, *"What skills and abilities do you need for this kind of work?"* names *characteristics required of the worker* to perform successfully in occupations in this group. For example, it points up such actual or potential abilities needed as "influencing people's opinions, attitudes, and judgments" and "willingness and ability to work within precise limits or standards of accuracy." This information should help the counselee determine whether these are the kinds of work situations and requirements that would appeal to him or her.

The third item, *"How do you know if you would like or could learn to do this type of work?"* mentions *work experience, extracurricular activities, hobbies,* and other activities and experiences, as well as *skills, potentials, and interests* relevant to occupations in this work group. This item provides clues concerning the counselee's possible ability to do, or learn to do, and want to do this kind of work.

Questions such as "Have you written an original story?", "Can you create original characters or situtations that interest and entertain others?", and "Have you taken an industrial arts or machine shop course?", "Do you like to set up machines according to written standards?" help the counselee think through whether he or she has the interest and ability to do, or learn to do, types of work included in this group. The counselor should help the counselee relate these kinds of personal experiences and interests to the work group being explored.

The fourth item, *"How can you prepare for and enter this type of work?"* describes the kind of *training, work, and other experience* usually required by or acceptable to employers and the means of entry into the field. The counselee, if interested in this work group, will consider at this point whether he or she has the kind of preparation usually needed or is willing to take further training that may be required.

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The fifth item, *"What else should you consider about these jobs?"* provides a number of *other considerations* that the counselee will want to weigh in making up his or her mind about the satisfactions and suitability of this kind of work. For example, the counselee is advised "Most new workers in writing occupations start with routine assignments such as writing headlines." "Only in establishments where few writers are employed is the newcomer given creative writing assignments," and "Some workers are paid hourly wages. Other workers are paid according to the number of pieces they produce."

A simple record should be kept of all work groups reviewed and those identified for further exploration.

The counselor or counselee might prefer either to complete Step 3 for each work group being explored before moving on to the next work group, or to complete Step 2 for all work groups being considered, before exploring any of them further.

STEP 3. HELP THE COUNSELEE TO EXPLORE SUBGROUPS AND SPECIFIC OCCUPATIONS

After exploring the work group, the counselee will usually find either that he or she is not seriously interested in the type of work covered by the group or will want to explore it still further. Where the counselee is still interested in the work group, the counselor should help him or her to examine and interpret subgroup titles and to choose one or more for further investigation.

The specific occupations within each subgroup are arranged in clusters by the industry in which the jobs occur. Therefore, in examining subgroups and occupations, a factor to consider is whether the industry is located in the area in which the counselee lives or to which he or she is willing to go.

The counselee should be encouraged to identify subgroup titles that seem interesting and potentially suitable, based on all the information that the counselee now has about himself or herself. Then specific occupations that may tentatively appeal to the counselee could be identified.

The counselee should be helped to look up in the *Dictionary of Occupational Titles* the definitions of occupations that seem of particular interest. The subgroups and the specific occupations within them should be considered from the standpoint of opportunities available for placement or training, of the counselee's interests and qualifications, and of the occupational requirements.

STEP 4. HELP THE COUNSELEE TO SELECT HIS OR HER VOCATIONAL GOAL

A listing should be made of subgroups and specific occupations that appear to be particularly interesting and suitable for the counselee. The pros and cons of each should be weighed and the most desirable and suitable work groups, subgroups, or occupations selected by the counselee as his or her vocational goal. The goal may be expressed in terms of any of these three categories but most likely of the work groups, or subgroups, depending upon the individual's qualifications.

STEP 5. HELP THE COUNSELEE TO DEVELOP A PLAN FOR ATTAINING THE GOAL

As usual, the counselor will assist the counselee to develop a realistic vocational plan for reaching the goal; the plan should reflect actions to be taken by the local office and the counselee, either to enter a training program or to obtain suitable employment.

STEP 6. ASSIGN APPROPRIATE OCCUPATIONAL CLASSIFICATIONS

The counselor, particularly in the employment service setting, should assign one or more occupational classifications to reflect the occupational goal(s) arrived at by the counselee and to facilitate his or her selection for referral to suitable employment.

Two or more counseling interviews are usually required to help the counselee make a suitable occupational choice and to plan to implement that choice. The counselor may wish to suggest that, during one of the interviews or between interviews, the counselee review a copy of the *Guide for Occupational Exploration*. The section, "Use by Individuals Without Counselor Assistance," will provide helpful suggestions for reviewing the *Guide* even though the counselee is actually receiving assistance from the counselor.

The *Guide* thus serves as a useful reference tool in career exploration for the individual as well as an important tool for the counselor in helping develop a sound and realistic vocational goal for the counselee.

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05.09 Material Control

Workers in this group receive, store, and/or ship materials and products. Some estimate and order the quantities and kinds of materials needed. Others regulate and control the flow of materials to places in the plant where they are to be used. Most have to keep records. Jobs are found in institutions, industrial plants, and Government agencies.

What kind of work would you do?

Your work activities would depend upon your specific job. For example, you might

- —weigh truck loaded with cotton and compute weight and gin charges.
- —count, sort, or weigh articles in a shipment to check accuracy of invoices or requisitions.
- —verify inventory records of a department store against the actual count of items.
- —fill out receiving tickets on incoming items or complete delivery tickets or outgoing items.
- —receive, store, and issue tools, dies, and equipment in a factory.
- —store and issue sports equipment for a professional athletic team.
- —check the progress of an order in a factory and write a report.

What skills and abilities do you need for this kind of work?

To do this kind of work, you must be able to:

- —use arithmetic to keep records, take inventory, estimate quantities, or schedule the flow of materials through the plant.
- —avoid errors in recordkeeping.
- —use hands and fingers to measure, handle, store, or move large and small items.
- —reach to place materials on shelves higher than your head.
- —see small print and figures in catalogs, on shipping tickets, and on invoices.

How do you know if you would like or could learn to do this kind of work?

The following questions may give you clues about yourself as you consider this group of jobs.

- —Have you taken industrial arts or vocational courses? Did you learn how to issue, store, and care for tools?
- —Have you been an equipment manager for a sports team? Were you responsible for issuing and maintaining the equipment?
- —Have you mailed or sent packages by freight? Can you compute freight or postal rates accurately?
- —Have you been a stock clerk in the military service? Did you enjoy this type of work?

How can you prepare for and enter this kind of work?

Occupations in this group usually require education and/or training extending from a short demonstration to over two years, depending upon the specific kind of work. Evidence of basic reading, writing, and mathe-

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matics skills are usually required by employers. On-the-job training is provided to teach workers the procedures involved in each particular job. Complex tasks involving judgment or responsibility are assigned as workers become experienced.

Jobs involving tools and machines often require a knowledge of the use and care of such equipment. One year of shop experience is sometimes required.

What else should you consider about these jobs?

Many jobs in this group require workers to be on their feet most of the work day. Most of the work is done indoors. However, different working conditions are sometimes present on loading platforms, storage yards, or cold storage rooms.

Workers who move heavy objects have to use care to avoid body strain or injury.

If you think you would like to do this kind of work, look at the job titles listed on the following pages. Select those that interest you, and read their definitions in the Dictionary of Occupational Titles.

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Material Control

05.09.01 Shipping, Receiving, and Stock Checking

Aircraft-Equipment-and-Accessories Assembler (aircraft-aerospace mfg.) 222.587-010

Cargo Agent (air trans.) 248.367-018
Senior-Commissary Agent (air trans.) 922.137-010

Custodian, Athletic Equipment (amuse. & rec.) 969.367-010

Laborer, Stores (any ind.) 922.687-058
Warehouse Supervisor (any ind.) 929.137-022

Checker, Bakery Products (bake. prod.) 222.487-010

Last Putter-Away (boot & shoe; rubber goods) 922.687-066

Marker (clean., dye., & press.; laund.) 369.687-026

Inventory Clerk (clerical) 222.387-026
Laboratory Clerk (clerical) 222.587-026
Parts Clerk (clerical) 222.367-042
Parts-Order-and-Stock Clerk (clerical) 249.367-058
Shipping and Receiving Clerk (clerical) 222.387-050
Shipping-and-Receiving Supervisor (clerical) 222.137-030
Shipping-and-Receiving Weigher (clerical) 222.367-058
Shipping Checker (clerical) 222.687-030
Stock Supervisor (clerical) 222.137-034
Tallier (clerical) 221.587-030
Tool-Crib Attendant (clerical) 222.367-062
Tool-Crib Supervisor (clerical) 222.137-046

Hardener Helper (clock & watch) 504.686-018

Dispatcher (const.) 849.137-010

Milk Receiver (dairy prod.) 222.585-010
Milk-Receiver, Tank Truck (dairy prod.) 222.485-010

Parts Lister (electronics) 229.367-014

Gun-Repair Clerk (firearms) 222.387-022

Yard Supervisor (forestry) 922.137-030

Grain Elevator Clerk (grain & feed mill.; malt liquors) 222.567-010
Sack-Department Supervisor (grain & feed mill.) 229.137-010

Sample-Display Preparer (hosiery) 222.687-026

Linen-Room Attendant (hotel & rest.; medical ser.) 222.387-030

Odd-Piece Checker (knit goods) 221.587-018

Linen-Room Supervisor (laund.) 222.137-014
Linen-Supply Load-Builder (laund.) 920.687-118

Bookmobile Driver (library) 249.363-010
Library Clerk, Talking Books (library) 209.387-026

Load Checker (light, heat, & power) 952.367-010

Transformer-Stock Clerk (light, heat, & power) 222.587-054

Pharmacy Helper (medical ser.) 074.387-010

Safety-Lamp Keeper (mining & quarrying) 729.684-042

Film-Vault Supervisor (motion pic.) 222.137-010
Property Custodian (motion pic.) 222.387-042

Checker (motor trans.) 919.687-010

Metal-Control Coordinator (nonfer. metal alloys) 222.167-010

Supply Clerk (per. ser.) 339.687-010

Supervisor, Finishing Department (photofinish.) 976.137-014

Distribution Supervisor (pipe lines; whole. tr.) 914.137-010

Cut-File Clerk (print. & pub.) 222.367-014
Mailer (print. & pub.) 222.587-030
Mailer Apprentice (print. & pub.) 222.587-032

Fur-Storage Clerk (ret. tr.) 369.367-010
Locker-Plant Attendant (ret. tr.; whole. tr.) 922.684-010
Meat Clerk (ret. tr.) 222.684-010
Order Filler (ret. tr.; whole. tr.) 222.487-014
Stamp Classifier (ret. tr.) 299.387-018
Stock Clerk, Self-Service Store (ret. tr.) 299.367-014
Tire Adjuster (ret. tr.) 241.367-034
Yard Worker, Used Building Materials (ret. tr.) 922.667-010

Floor-Space Allocator (tobacco; whole. tr.) 222.367-030

Ship Runner (water trans.) 222.567-014
Storekeeper (water trans.) 222.387-062

Lumber Scaler (woodworking) 221.487-010

05.09.02 Estimating, Scheduling, and Record Keeping

Gin Clerk (agric.) 221.467-010

Line-Up Worker (auto. mfg.) 221.367-026

Back-Shoe Worker (boot & shoe) 221.387-010
Complaint Clerk (boot & shoe) 221.387-014
Job Putter-Up and Ticket Preparer (boot & shoe) 788.587-010

Fruit Coordinator (can. & preserv.) 529.167-010

Cloth Finisher (carpet & rug; textile) 589.130-010
Yardage-Control Clerk (carpet & rug) 221.587-050

Rug Measurer (clean., dye., & press.; ret. tr.) 369.367-014

Job Tracer (clerical) 221.387-034
Laundry Clerk (clerical) 221.387-038
Magazine Keeper (clerical) 222.367-038
Material Coordinator (clerical) 221.167-014
Material Expediter (clerical) 221.367-042

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Order Detailer (clerical) 221.387-046
Production Coordinator (clerical) 221.167-018
Sales Correspondent (clerical) 221.367-062
Stock Clerk (clerical) 222.387-058
Supervisor, Assembly Stock (clerical) 222.137-042
Supervisor, Production Control (clerical) 221.137-018

Control Clerk (clock & watch) 221.387-018
Control Clerk, Head (clock & watch) 221.137-010

Dispatcher, Ready-Mix Plant (const.) 849.137-014
Yard Supervisor (const.) 229.137-014

Quality-Control Technician (distilled liquors) 529.367-022

Follow-Up Clerk (elec. equip.) 221.367-018

Electronics Utility Worker (electronics) 726.361-010

Production Assistant (explosives) 221.387-050

Melter Clerk (found.) 221.387-042

Fabric-and-Accessories Estimator (garment) 221.482-010
Yardage Estimator (garment) 221.484-010

Recorder (iron & steel) 221.367-050

Estimator, Jewelry (jewelry) 221.387-022

Work-Ticket Distributor (knit goods) 221.667-010

Supervisor, Laundry (laund.) 361.137-010

Field Recorder (light, heat, & power) 229.367-010

Wheel-Press Clerk (loco. & car bldg. & rep.) 221.587-046

Evaluator (nonprofit organ.) 249.367-034

Expediter Clerk (optical goods) 221.387-026
Prescription Clerk, Lens-and-Frames (optical goods) 222.367-050

Estimator, Paperboard Boxes (paper goods) 221.362-018

Estimator, Printing (print. & pub.) 221.367-014

Alterations Workroom Clerk (ret. tr.) 221.367-010
Drapery and Upholstery Estimator (ret. tr.) 299.387-010
Drapery and Upholstery Measurer (ret. tr.) 299.364-010
Measurer (ret. tr.) 869.367-014
Watch-and-Clock-Repair Clerk (ret. tr.) 299.367-018

Engine Dispatcher (r.r. trans.) 910.367-018

Tare Weigher (slaught. & meat pack.; sugar; tobacco) 221.587-034

Measurer (struct. & ornam. metalwork) 869.487-010

Checker (textile) 221.587-010
Goods Layer (textile) 781.687-038

Ticket Worker (tobacco) 221.482-018

Supercargo (water trans.) 248.167-010

Booking Clerk (whole. tr.) 216.587-010

Lumber Estimator (wood. box) 221.482-014

Retort-Load Expediter (wood preserving) 221.167-022

05.09.03 Verifying, Recording, and Marking

Aircraft-Shipping Checker (aircraft-aerospace mfg.) 222.387-010

Laboratory-Sample Carrier (any ind.) 922.687-054
Laundry Worker (any ind.) III 369.387-010

Checker-in (boot & shoe) 221.587-014
Floorworker, Lasting (boot & shoe) 788.687-046
Outsole Scheduler (boot & shoe) 221.587-022
Ticket Scheduler (boot & shoe) 221.587-038

Checker, Dump Grounds (bus. ser.) 219.367-010
Tank Calibrator (bus. ser.) 229.387-014

Sample Checker (carpet & rug; textile) 229.687-010

Checker (clean., dye., & press.; laund.) 369.687-014
Vault Custodian (clean., dye., & press.) 369.587-010

Chart Changer (clerical) 221.584-010
Industrial-Order Clerk (clerical) 221.367-022
Material Clerk (clerical) 222.387-034
Order Caller (clerical) 209.667-014
Receiving Checker (clerical) 222.687-018

Truckload Checker (const.) 222.367-066

Swatch Clerk (garment) 222.587-050

Defect Repairer, Glassware (glass mfg.) 772.684-010

Opener-Verifier-Packer, Customs (gov. ser.) 168.387-010

Food-and-Beverage Checker (hotel & rest.) 211.482-018
Food Order Expediter (hotel & rest.) 319.467-010
Kitchen Clerk (hotel & rest.) 222.587-022

Recorder (knit goods) 221.587-026

Assembler, Wet Wash (laund.) 361.687-010

Stacker (leather prod.) 222.587-046

Gas-Volume Computer (light, heat, & power; petrol. refin.; pipe lines) 216.585-010
Meter Reader (light, heat, & power; waterworks) 209.567-010
Turbine Attendant (light, heat, & power) 952.567-010

Car Chaser (malt liquors) 910.167-010

Sorter-Pricer (nonprofit organ.) 222.387-054

Marker (ret. tr.; whole. tr.) 209.587-034
Stock Checker, Apparel (ret. tr.) 299.667-014
Stubber (ret. tr.) 222.687-034
Supervisor, Marking Room (ret. tr.) 209.137-026

Car Checker (r.r. trans.) 222.387-014

Grey-Goods Marker (textile) 229.587-010

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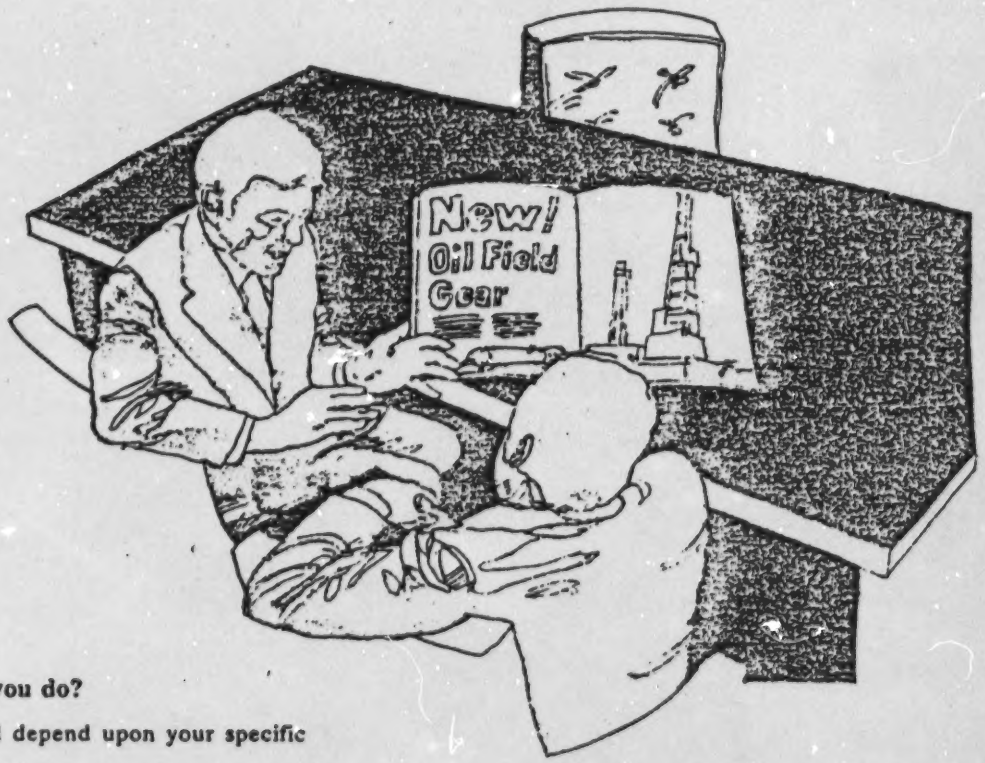
08.01 Sales Technology

Workers in this group sell products such as industrial machinery, data processing equipment, and pharmaceuticals; services such as industrial shipping, insurance, and advertising. They advise customers of the capabilities, uses, and other important features of these products and services, and help them choose those best suited to their needs. They work for manufacturers, wholesalers, and insurance, financial, and business service institutions. Also included in this group are workers who buy products, materials, securities and properties for resale. Some work for themselves.



What kind of work would you do?

Your work activities would depend upon your specific job. For example, you might

- —call on oil companies to sell them oilfield equipment.
- —call on businesses to sell them radio and television time.
- —call on businesses to sell them computers.
- —advise people about the type and amount of insurance they should buy.
- —buy clothing and accessories for stocking a department store.
- —sell professional supplies and equipment to dentists, doctors, or engineers.
- —buy the grain harvest from farmers for resale to processing plants.

What skills and abilities do you need for this kind of work?

To do this kind of work, you must be able to:

- —understand the principles of electronics, chemistry, economics, or communications, as they relate to the products you sell or buy.
- —organize your own activities to make the best use of your time and effort.
- —express yourself well when talking to potential buyers or sellers, to discuss features of the products or services involved and convince the other person of both your knowledge and integrity.
- —use arithmetic in computing the mark-up on merchandise, cost of installing equipment or machinery in a plant, or quoting special rates for varying amounts of materials purchased.
- —maintain enthusiasm and interest throughout all conferences with buyers or sellers.
- —keep accurate records of contacts, sales, and purchases.

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How do you know if you would like or could learn to do this kind of work?

The following questions may give you clues about yourself as you consider this group of jobs.

- —Have you taken business or sales related courses? Did you like the courses?
- —Have you attended auctions? Can you estimate, in advance, the selling prices of the items?
- —Have you bought items to sell? Did you make a profit on your sales? Do you enjoy doing this type of activity?
- —Have you made speeches or been in debates? Do you enjoy presenting ideas to people?
- —Have you worked as a salesperson in a store? Do you enjoy sales work?

How can you prepare for and enter this kind of work?

Occupations in this group usually require education and/or training extending from six months to over ten years, depending upon the specific kind of work. A common way to prepare is to obtain a two- or four-year degree with a major in business administration, marketing, or a similar field. For jobs involving technical sales, a degree in a field such as engineering, chemistry, or physics is helpful. Sometimes workers in other sales groups advance after obtaining related work experience.

Most employers give new employees formal and informal training. This training may last up to one year. Workers learn the policies, procedures, and details involved.

Jobs in real estate or insurance may require a state or local license. Workers usually must take a written test to obtain these licenses.

What else should you consider about these jobs?

Most of these jobs require meeting new pople. Some jobs involve frequent travel. Many workers are under pressure as they make decisions which affect sales or investments involving large sums of money.

Some workers receive a salary, others work on a commission. A commission is usually a percent of the selling price of an item. Sometimes a worker may receive a combination of salary and commission. Some workers in this group own their own businesses.

If you think you would like to do this kind of work, look at the job titles listed on the following pages. Select those that interest you, and read their definitions in the Dictionary of Occupational Titles.

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Sales Technology

08.01.01 Technical Sales

Sales Representative, Graphic Art (bus. ser.) 254.251-010

Sales Representative, Travelers' Checks (finan. inst.) 251.257-018

Sales Representative, Aircraft (ret. tr.; whole. tr.) 273.253-010

Sales Representative, Signs (signs) 254.357-022
Sales Representative, Signs and Displays (signs) 254.257-010

Communications Consultant (tel. & tel.) 253.157-010

Pharmaceutical Detailer (whole. tr.) 262.157-010
Sales Representative, Abrasives (whole. tr.) 274.357-010
Sales Representative, Aircraft Equipment and Parts (whole. tr.) 273.357-010
Sales Representative, Building Equipment and Supplies (whole. tr.) 274.357-018
Sales Representative, Chemicals and Drugs (whole. tr.) 262.357-010
Sales Representative, Communication Equipment (whole. tr.) 271.257-010
Sales Representative, Computers and Edp Systems (whole. tr.) 275.257-010
Sales Representative, Construction Machinery (whole. tr.) 274.357-022
Sales Representative, Dental and Medical Equipment and Supplies (whole. tr.) 276.257-010
Sales Representative, Electronics Parts (whole. tr.) 271.357-010
Sales Representative, Electroplating (whole. tr.) 259.257-014
Sales Representative, Elevators, Escalators, and Dumbwaiters (whole. tr.) 274.157-010
Sales Representative, Foundry and Machine Shop Products (whole. tr.) 274.257-010
Sales Representative, Industrial Machinery (whole. tr.) 274.357-038
Sales Representative, Metals (whole. tr.) 274.357-054
Sales Representative, Oilfield Supplies and Equipment (whole. tr.) 274.357-058
Sales Representative, Precision Instruments (whole. tr.) 276.357-014
Sales Representative, Radiographic-Inspection Equipment and Services (whole. tr.) 271.352-010
Sales Representative, Ultrasonic Equipment (whole. tr.) 271.352-014
Sales Representative, Weighing and Force-Measurement Instruments (whole. tr.) 276.257-014
Sales Representative, Welding Equipment (whole. tr.) 274.357-074
Service Representative, Elevators, Escalators, and Dumbwaiters (whole. tr.) 259.257-018

08.01.02 Intangible Sales

Traffic Agent (air trans.; motor trans.; r.r. trans.; water trans.) 252.257-010

Sales Agent, Financial-Report Service (bus. ser.) 251.357-014
Sales Agent, Psychological Tests and Industrial Relations (bus. ser.; print. & pub.) 251.257-014
Sales Representative, Weather-Forecasting Service (bus. ser.) 259.357-030
Tobacco-Warehouse Agent (bus. ser.) 259.357-038

Sales Representative, Education Courses (education) 259.257-010

Sales Agent, Financial Services (finan. inst.) 251.257-010

Sales Representative, Hotel Services (hotel & rest.) 259.157-014

Estate Planner (insurance) 186.167-010
Placer (insurance) 239.267-010
Sales Agent, Insurance (insurance) 250.257-010
Special Agent, Group Insurance (insurance) 169.167-050

Sales Representative, Public Utilities (light, heat, & power; tel. & tel.) 253.357-010

Sales Representative, Shipping Services (motor trans.) 252.357-014

Sales Representative, Advertising (print. & pub.) 254.357-014

Sales Representative, Radio and Television Time (radio & tv broad.) 259.357-018

Sales Representative, Telephone Services (tel. & tel.) 253.257-010

Sales Representative, Printing (whole. tr.) 254.357-018

08.01.03 Purchasing and Sales

Christmas-Tree Contractor (any ind.) 162.117-010

Business-Opportunity-and-Property-Investment Broker (bus. ser.; real estate) 189.157-010

Field-Contact Technician (dairy prod.) 162.117-026

Foreign Banknote Teller-Trader (finan. inst.) 211.362-014

Buyer, Grain (grain & feed mill.; whole. tr.) 162.167-010

Outside Property Agent (motion pic.) 162.157-030

Buyer (profess. & kin.) 162.157-018

Buyer, Assistant (ret. tr.) 162.157-022
Comparison Shopper (ret. tr.; whole. tr.) 296.367-014
Pawnbroker (ret. tr.) 191.157-010

Buyer, Tobacco, Head (whole. tr.) 162.167-014
Commission Agent, Agricultural Produce (whole. tr.) 260.357-010
Commission Agent, Livestock (whole. tr.) 162.157-026
Sales Representative, Livestock (whole. tr.) 260.257-010

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08.02 General Sales

Workers in this group sell, demonstrate, and solicit orders for products and services of many kinds. They are employed by retail and wholesale firms, manufacturers and distributors, business services, and non-profit organizations. Some spend all their time in a single location, such as a department store or automobile agency. Others call on businesses or individuals to sell products or services, or follow up on earlier sales.

What kind of work would you do?

Your work activities would depend upon your specific job. For example, you might

- —demonstrate and sell radios and television sets in a department store.
- —sell hardware supplies to stock stores.
- —help customers find what they want in a jewelry store.
- —sell pets and pet supplies in a pet store.
- —call people on the telephone to sell them products.
- —arrange and conduct demonstration parties in people's homes.
- —drive a truck on a set route and sell products to people at their homes.
- —call on people in their homes to sell pest control services.
- —train or supervise workers in a sales department and keep records of merchandise on hand.

What skills and abilities do you need for this kind of work?

To do this kind of work, you must be able to:

- —understand and explain company policies about such things as deferred payment plans, financing charges, returned goods privileges, or service guarantees.
- —use arithmetic to total costs of purchase, make change, compute percentages, fill out order and sales forms, and draw up time purchase contracts.
- —treat customers with courtesy and respect, even in difficult situations.
- —talk easily and persuasively to other people, using language that they'll understand.
- —help customers to make up their minds about purchases by suggesting appropriate products.

How do you know if you would like or could learn to do this kind of work?

The following questions may give you clues about yourself as you consider this group of jobs.

- —Have you had courses in sales, bookkeeping, or business math? Did you like these courses? Do you have an ability to work with numbers?
- —Have you sold items door-to-door? Have you collected money or items for a charity? Do you like to meet people this way?
- —Have you given oral reports in front of a group? Do you express your ideas easily to strangers?
- —Have you worked in a military PX or cafeteria? Do you enjoy selling items to people?

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How can you prepare for and enter this kind of work?

Occupations in this group usually require education and/or training extending from three months to over two years, depending upon the specific kind of work. Most employers require applicants to have a high school education or its equal. Courses in selling or retailing are helpful. Many high schools, junior colleges, and community colleges offer courses and programs in this field. Some schools provide work-study programs in which students work part-time as well as attend classes. Selling experience during vacations is also helpful in preparing for this kind of work.

Employers usually provide on-the-job training to teach new workers about the company policies and the products or services to be sold. These training programs may last from one week to three months. Some workers are required to have extra skills such as driving a truck or playing a musical instrument. Other workers are required to make minor repairs or adjustments on equipment they sell.

Some jobs in this group are supervisory or management positions to which workers with sales experience may be promoted.

What else should you consider about these jobs?

Many retail sales jobs require workers to vary working hours. Some businesses are open to the public on Sundays, holidays, or evenings. Selling is usually done at the customer's convenience.

Some workers are paid by the hour. Others are paid according to how much they sell. However, some workers receive earnings from a combination of these ways.

If you think you would like to do this kind of work, look at the job titles listed on the following pages. Select those that interest you, and read their definitions in the Dictionary of Occupational Titles.

BEST COPY AVAILABLE

General Sales

08.02.01 Wholesale

Manufacturers' Representative (whole. tr.) 279.157-010
Salesperson, Florist Supplies (whole. tr.) 275.357-054
Sales-Promotion Representative (whole. tr.) 269.357-018
Sales Representative, Animal-Feed Products (whole. tr.) 272.357-010
Sales Representative, Apparel Trimmings (whole. tr.) 261.357-010
Sales Representative, Architectural and Engineering Supplies (whole. tr.) 276.357-010
Sales Representative, Barber and Beauty Equipment and Supplies (whole. tr.) 275.357-010
Sales Representative, Bottles and Bottling Equipment (whole. tr.) 274.357-014
Sales Representative, Canvas Products (whole. tr.) 261.357-014
Sales Representative, Church Furniture and Religious Supplies (whole. tr.) 275.357-014
Sales Representative, Commercial Equipment and Supplies (whole. tr.) 275.357-018
Sales Representative, Containers (whole. tr.) 274.357-026
Sales Representative, Cordage (whole. tr.) 275.357-022
Sales Representative, Dairy Supplies (whole. tr.) 274.357-030
Sales Representative, Farm and Garden Equipment and Supplies (whole. tr.) 272.357-014
Sales Representative, Food Products (whole. tr.) 260.357-014
Sales Representative, Footwear (whole. tr.) 261.357-018
Sales Representative, General Merchandise (whole. tr.) 279.357-014
Sales Representative, Hardware Supplies (whole. tr.) 274.357-034
Sales Representative, Home Furnishings (whole. tr.) 270.357-010
Sales Representative, Hotel and Restaurant Equipment and Supplies (whole. tr.) 275.357-026
Sales Representative, Household Appliances (whole. tr.) 270.357-014
Sales Representative, Industrial Rubber Goods (whole. tr.) 274.357-042
Sales Representative, Jewelry (whole. tr.) 279.357-018
Sales Representative, Leather Goods (whole. tr.) 279.357-022
Sales Representative, Lubricating Equipment (whole. tr.) 274.357-046
Sales Representative, Malt Liquors (whole. tr.) 260.357-018
Sales Representative, Material-Handling Equipment (whole. tr.) 274.357-050
Sales Representative, Men's and Boys' Apparel (whole. tr.) 261.357-022
Sales Representative, Mortician Supplies (whole. tr.) 275.357-030
Sales Representative, Motor Vehicles and Supplies (whole. tr.) 273.357-022
Sales Representative, Musical Instruments and Accessories (whole. tr.) 277.357-014
Sales Representative, Novelties (whole. tr.) 277.357-018
Sales Representative, Paper and Paper Products (whole. tr.) 279.357-026
Sales Representative, Petroleum Products (whole. tr.) 269.357-014
Sales Representative, Plastic Products (whole. tr.) 279.357-030
Sales Representative, Pressure-Sensitive Tape (whole. tr.) 275.357-038
Sales Representative, Printing Supplies (whole. tr.) 274.357-062
Sales Representative, Publications (whole. tr.) 277.357-022
Sales Representative, Railroad Equipment and Supplies (whole. tr.) 273.357-026
Sales Representative, Recreation and Sporting Goods (whole. tr.) 277.357-026
Sales Representative, Safety Apparel and Equipment (whole. tr.) 261.357-026
Sales Representative, School Equipment and Supplies (whole. tr.) 275.357-042
Sales Representative, Shoe Leather and Findings (whole. tr.) 275.357-046
Sales Representative, Textile Designs (whole. tr.) 274.357-066
Sales Representative, Textile Machinery (whole. tr.) 274.357-070
Sales Representative, Textiles (whole. tr.) 261.357-030
Sales Representative, Toilet Preparations (whole. tr.) 262.357-014
Sales Representative, Vending and Coin Machines (whole. tr.) 275.357-050
Sales Representative, Veterinarian Supplies (whole. tr.) 276.357-018
Sales Representative, Videotape (whole. tr.) 271.357-014
Sales Representative, Wire Rope (whole. tr.) 274.357-078
Sales Representative, Women's and Girls' Apparel (whole. tr.) 261.357-038
Sales Representative, Writing and Marking Pens (whole. tr.) 277.357-030
Sales Supervisor, Malt Liquors (whole. tr.) 299.137-014

08.02.02 Retail

Sales Exhibitor (nonprofit organ.) 279.357-010

Salesperson, Wigs (per. ser.; ret. tr.) 261.351-010

Salesperson, Art Objects (ret. tr.) 277.457-010
Salesperson, Automobiles (ret. tr.) 273.353-010
Salesperson, Books (ret. tr.) 277.357-034
Salesperson, Burial Needs (ret. tr.) 279.357-042
Salesperson, Corsets (ret. tr.) 261.354-010
Salesperson, Cosmetics and Toiletries (ret. tr.) 262.357-018
Salesperson, Curtains and Draperies (ret. tr.) 270.357-022
Salesperson, Flowers (ret. tr.) 260.357-026
Salesperson, Flying Squad (ret. tr.) 279.357-046
Salesperson, Furniture (ret. tr.) 270.357-030
Salesperson, Furs (ret. tr.) 261.357-042
Salesperson, Hearing Aids (ret. tr.) 276.354-010
Salesperson, Household Appliances (ret. tr.) 270.357-034
Salesperson, Infants' and Children's Wear (ret. tr.) 261.357-046
Salesperson, Jewelry (ret. tr.) 279.357-058
Salesperson, Men's and Boys' Clothing (ret. tr.) 261.357-050
Salesperson, Men's Furnishings (ret. tr.) 261.357-054
Salesperson, Millinery (ret. tr.) 261.357-058
Salesperson, Musical Instruments and Accessories (ret. tr.) 277.357-038
Salesperson, Orthopedic Shoes (ret. tr.) 276.257-018
Salesperson, Pets and Pet Supplies (ret. tr.) 277.357-042

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Salesperson, Phonograph Records and Tape Recordings (ret. tr.) 277.357-046
Salesperson, Pianos and Organs (ret. tr.) 277.354-010
Salesperson, Sewing Machines (ret. tr.) 270.352-010
Salesperson, Sheet Music (ret. tr.) 277.357-054
Salesperson, Shoes (ret. tr.) 261.357-062
Salesperson, Sporting Goods (ret. tr.) 277.357-058
Salesperson, Stereo Equipment (ret. tr.) 270.357-038
Salesperson, Surgical Appliances (ret. tr.) 276.257-022
Salesperson, Toy Trains and Accessories (ret. tr.) 277.357-066
Salesperson, Trailers and Motor Homes (ret. tr.) 273.357-034
Salesperson, Women's Apparel and Accessories (ret. tr.) 261.357-066
Salesperson, Yard Goods (ret. tr.) 261.357-070
Sales-Service Representative, Milking Machines (ret. tr.) 299.251-010

08.02.03 Wholesale and Retail
Auctioneer (ret. tr.; whole. tr.) 294.257-010
Salesperson, Automobile Accessories (ret. tr.; whole. tr.) 273.357-030
Salesperson, Chins and Silverware (ret. tr.; whole. tr.) 270.357-018
Salesperson, Electric Motors (ret. tr.; whole. tr.) 271.354-010
Salesperson, Floor Coverings (ret. tr.; whole. tr.) 270.357-026
Salesperson, General Hardware (ret. tr.; whole. tr.) 279.357-050
Salesperson, General Merchandise (ret. tr.; whole. tr.) 279.357-054
Salesperson, Horticultural and Nursery Products (ret. tr.; whole. tr.) 272.357-022
Salesperson, Parts (ret. tr.; whole. tr.) 279.357-062
Salesperson, Photographic Supplies and Equipment (ret. tr.; whole. tr.) 277.357-050
Salesperson, Stamps or Coins (ret. tr.; whole. tr.) 277.357-062
Sales Representative, Boats and Marine Supplies (ret. tr.; whole. tr.) 273.357-018
Sales Representative, Fuels (ret. tr.; whole. tr.) 269.357-010
Sales Representative, Hobbies and Crafts (ret. tr.; whole. tr.) 277.357-010
Sales Representative, Office Machines (ret. tr.; whole. tr.) 275.357-034
Sales Representative, Poultry Equipment and Supplies (ret. tr.; whole. tr.) 272.357-018
Sales Representative, Tobacco Products and Smoking Supplies (ret. tr.; whole. tr.) 260.357-022
Sales Representative, Uniforms (ret. tr.; whole. tr.) 261.357-034
Sales Representative, Water-Softening Equipment (ret. tr.; whole. tr.) 279.357-034

08.02.04 Real Estate
Superintendent, Sales (const.) 250.157-010

Leasing Agent, Residence (real estate) 250.357-014

Sales Agent, Real Estate (real estate) 250.357-018

Building Consultant (whole. tr.) 250.357-010

08.02.05 Demonstration and Sales
Sales Representative, Dancing Instructions (education) 259.357-014

Demonstrator, Electric-Gas Appliances (light, heat, & power) 297.357-010

Demonstrator (ret. tr.; whole. tr.) 297.354-010
Demonstrator, Knitting (ret. tr.) 297.354-014
Demonstrator, Sewing Techniques (ret. tr.) 297.454-010
Salesperson-Demonstrator, Party Plan (ret. tr.) 279.357-038

08.02.06 Services
Sales Agent, Business Services (bus. ser.) 251.357-010
Sales Agent, Pest Control Service (bus. ser.) 251.357-018
Sales Representative, Automotive-Leasing (bus. ser.) 273.357-014
Sales Representative, Franchise (bus. ser.) 251.357-022
Sales Representative, Herbicide Service (bus. ser.) 251.357-026
Travel Agent (bus. ser.; ret. tr.) 252.157-010

Linen Controller (laund.) 299.357-010

Sales Representative, Audiovisual Program Productions (motion pic.) 259.157-010

Crating-and-Moving Estimator (motor trans.; r.r. trans.) 252.357-010
Sales Representative (motor trans.) 250.357-022

Sales Representative, Television Cable Service (radio & tv broad.) 259.357-022

Sales Representative, Upholstery and Furniture Repair (ret. tr.) 259.357-026
Wedding Consultant (ret. tr.) 299.357-018

08.02.07 Driving-Selling
Driver Helper, Sales Route (ret. tr.; whole. tr.) 292.667-010
Driver, Sales Route (ret. tr.; whole. tr.) 292.353-010
Supervisor, Route Sales-Delivery Drivers (ret. tr.; whole. tr.) 292.137-014

08.02.08 Soliciting-Selling
Group-Sales Representative (amuse. & rec.) 259.357-010

Membership Solicitor (any ind.) 293.357-022
Telephone Solicitor (any ind.) 299.357-014

Fund Raiser (nonprofit organ.) II 293.357-014

Song Plugger (radio & tv broad.) 165.157-010

Sales Representative, Door-To-Door (ret. tr.) 291.357-010
Subscription Crew Leader (ret. tr.) 291.157-010

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APPENDIX G

ANALYZING OCCUPATIONS[1&2]

The words "occupation" or "job" have different meanings, depending on how, when, or by whom they are used. "Job" or "occupation" are often used interchangeably with "position" and "task". To eliminate the confusion and to clarify terms, the U.S. Training and Employment Service developed the following definitions for use in job analysis:

> Element is the smallest step into which it is practicable to subdivide any work activity without analyzing separate motions, movements, and mental processes involved.
>
> Task is one or more elements and is one of the distinct activities that constitute logical and necessary steps in the performance of work by the worker. A task is created whenever human effort, physical or mental, is exerted to accomplish a specific purpose.
>
> Position is a collection of tasks constituting the total work assignment of a single worker. There are as many positions as there are workers in the country.
>
> Job is a group of positions which are identical with respect to their major or significant tasks and sufficiently alike to justify their being covered by a single analysis. There may be one or many persons employed in the same job.

The job analyst must be able to analyze a group of positions, determine the number of jobs existing among the positions, and then determine the exact nature of these jobs. Jobs should be analyzed as they exist, reporting the job as it exists at the time of the anlaysis, not as it should exist, not as it existed in the past, and not as it exists in similar establishments. In describ-

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[1]U.S. Department of Labor, Employment and Training Administration, Dictionary of Occupational Titles, Fourth Edition, 1977. Washington: U.S. Government Printing Office, 1977.

[2]U.S. Department of Labor, Manpower Administration, Handbook for Analyzing Jobs. Washington: U.S. Government Printing Office, 1982.

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ing the tasks that comprise an MDE occupation, or job, the analyst may encounter the following situations:

> The worker performs a specific cycle or sequence of operations. The analyst should begin with the first task the worker is called upon to do and consider the work steps successively.
>
> The worker has no regular cycle of operations. This situation is usually more difficult to analyze since it frequently involves a considerable variety of tasks. The analyst should organize the information according to function and then group fuctions under descriptive headings (duties).
>
> The worker frequently changes from one set of tasks to another. Tasks should ordinarily be analyzed collectively since the tasks involved, although performed by individual workers, actually constitute one job, all phases of which are performed by all the workers.
>
> The worker performs a given set of tasks although in emergencies he/she performs other sets of tasks involved in other jobs. The jobs are interchangeagle to the extent that any one of the workers performs the duties of any one of the others in emergencies.

Two categories of information are required for the analysis of an occupation: (1) Work Performed, which includes worker fuctions and materials, products, subject matter, and services, and (2) Worker Traits, which includes training time, aptitudes, temperaments, interests, and physical demands and environmental conditions.

This appendix includes U.S. Department of Labor descriptions of Worker Functions, which are described by the DOT numerical system, and Worker Traits categories of training time, aptitudes, and temperaments. These descriptions will help the MDE teacher-coordinator to (1) analyze new and emerging occupations and/or occupations not included in this series in respect to (2) educational/occupational guidance and instructional planning for individual students.

Parts of A DOT Definition

DOT occupational descriptions are numbered for classification and descriptive purposes. Each has a nine-digit occupational code. For example, the title "Instructor, Vocational Training" is described by the code "097.227-014." The first three digits identify a particular occupational group: "0" is Professional Occupation, "9" is a division within the category, and "7" defines the occupational group within the division. The last three digits differentiate a particular occupation from all others. The middle three digits of the 9-digit DOT occupational code are the Worker Functions ratings of the tasks performed in the occupation. A separate digit expresses the worker's function in relation to (1) data, (2) people, and (3) things. These relationships are expressed by 24 worker functions arranged in hierarchies according to level; the lower the identifying number, the higher the level.

Structure of Worker Functions

Data (first digit)	People (second digit)	Things (third digit)
0 Synthesizing	0 Mentoring	0 Setting Up
1 Coordinating	1 Negotiating	1 Precision Working
2 Analyzing	2 Instructing	2 Operating-Controlling
3 Compiling	3 Supervising	3 Driving-Operating
4 Computing	4 Diverting	4 Manipulating
5 Copying	5 Persuading	5 Tending
6 Comparing	6 Speaking-Signaling	6 Feeding-Offbearing
	7 Serving	7 Handling
	8 Taking Instructions-Helping	

Data. Information, knowledge, and conceptions related to data, people, or things resulting from observation, investigation, interpretation, visualization, and mental creation. Data are intangible and include numbers, words, symbols, ideas, concepts, and oral verbalization.

0 Synthesizing	Integrating analyses of data to discover facts and/or develop knowledge concepts or interpretations.
1 Coordinating	Determining time, place, and sequence of operations or action to be taken on the basis of analysis of data; executing determinations and/or reporting on events.
2 Analyzing	Examining and evaluating data. Presenting alternative actions in relation to the evaluation is frequently involved.

3	Compiling	Gathering, collating, or classifying information about data, people, or things. Reporting and/or carrying out a prescribed action in relation to the information is frequently involved.
4	Computing	Performing arithmetic operations and reporting on and/or carrying out a prescribed action in relation to them. Does not include counting.
5	Copying	Transcribing, entering, or posting data.
6	Comparing	Judging the readily observable functional, structural, or compositional characteristics (whether similar to or divergent from obvious standards) of data, people or things.

People. Human beings; also animals dealt with on an individual basis as if they were humans.

0	Mentoring	Dealing with individuals in terms of their total personality in order to advise, counsel, and/or guide them with regard to problems, that may be resolved by legal, scientific, clinical, spiritual, and/or other professional principles.
1	Negotiating	Exchanging ideas, information, and opinions with others to formulate policies and programs and/or arrive jointly at decisions, conclusions, or solutions.
2	Instructing	Teaching subject matter to others, or training others (including animals) through explanation, demonstration, and supervised practice; or making recommendations on the basis of technical disciplines.
3	Supervising	Determining or interpreting work procedures for a group of workers, assigning specific duties to them, maintaining harmonious relations among them, and promoting efficiency. (NOTE: A variety of responsibilities is involved in the function. While any of the following acitivities may indicate this function, usually a combination of them will present in jobs appropriately rated for supervision: Determines or interprets work procedures; Assigns duties to workers; Trains workers; Evaluates workers' performance against standards; Maintains harmonious relations among workers; Promotes efficiency among workers; Initiates and/or recommends personnel actions such as firing, hiring, promoting, transferring, and disciplining; Enforces company regulations; Maintains or directs maintenance of records related to production and personnel.)
4	Diverting	Amusing others. (Usually accomplished through the medium of stage, screen, television or radio.)
5	Persuading	Influence others in favor of a product, service, or point of view.
6	Speaking-Signaling	Talking with and/or signaling people to convey or exchange information. Includes giving assignments and/or directions to helpers or assistants.

7	Serving	Attending to the needs or requests of people or animals or the expressed or implicit wishes of people. Immediate response is involved.
8	Taking Instructions-Helping	Attending to the work assignment instructions or orders of supervisor. (No immediate response required unless clarification of instruction or orders is needed.) Helping applies to "non-learning" helpers (NOTE: Taking Instructions-Helping, the lowest level worker function involving people, consists of receiving orders or instructions and/or helping others. Although this function is present to some degree in any functional responsibility involving people, it is possible to identify jobs where the functional involvement with people is at this prescribed level. No varity of responsibility is involved in this function, and any of the following situations will be rated for Taking Instructions-Helping: Receives instructions; Is informed of assignments, orders, etc.; Helps and assists other workers; Obtains directions.)

Things. Inanimate objects as distinguished from human beings; substances or materials, machines, tools, equipment, and products. A thing is tangible and has shape, form, and other physical characteristics.

0	Setting Up	Adjusting machines or equipment by replacing or altering tools, jibs, fixtures, and attachments to prepare them to perform their functions, change their performance, or restore their proper functioning if they break down, Workers who set up one or a number of machines for other workers or who set up and personally operate a variety of machines are included here.
1	Precision Working	Using body member and/or tools or work aids to work, move, guide, or place objects or materials in situations where ultimate responsiblity for the attainment of standards occurs, and selection or appropriate tools, objects, or materials, and the adjustment of the tool to the task require exercise of considerable judgment.
2	Operating-Controlling	Starting, stopping, controlling, and adjusting the progress of a machine or equipment. Operating involves setting up and adjusting the machine or material(s) as the work progresses. Controlling involves observing gages, dials, etc. and turning valves and other devices to regulate factors such as temperature, pressure, flow of liquids, speed of pumps, and reactions of materials.
3	Driving-Operating	Starting, stopping,and controlling the actions of machines or equiment for which a course must be steered or which must be guided, in order to fabricate, process, and/or move things or people. (NOTE: Includes such activities as observing gages and dials; estimating distances and determining speed and direction of other objects; turning cranks and wheels; pushing gear lifts or levers. Includes such machines as cranes, conveyor systems, tractors, furnace charging machines, paving machines, and hoisting machines. Excludes manually powered machines,

		such as handtrucks and dollies, and power assisted machines, such as electric wheelbarrows and handtrucks.)
4	Manipulating	Using body members, tools, or special devices to work, move, guide, or place objects or materials. Involves some latitude for judgment with regard to precision attained and selecting appropriate tool, object, or material, although this is readily manifest.
5	Tending	Starting, stopping, and observing the functioning of machines and equipment. Involves adjusting materials or controls of the machine, such as flipping switches in response to lights. Little judgment is involved in making these adjustment.
6	Feeding-Offbearing	Inserting, throwing, dumping, or placing materials in or removing them from machines or equipment which are automatic or tended or operated by other workers.
7	Handling	Using body members, handtools, and/or special devices to work, move, or carry objects or materials. Involves little or no latitude for judgment with regard to attainment of standards or in selecting appropriate tool, object, or material.

Training Time

"Training time" is described by the U. S. Training and Employment Service as the amount of (1) General Educational Development (GED) and (2) Specific Vocational Preparation needed by a worker to acquire the knowledge and abilities required for average performance in a particular situation. GED includes formal and informal education that contribute to the individual's reasoning development and ability to follow instructions as well as acquisition of "tool" knowledges such as a language and mathematical skills. Such education is obtained in elementary or high school, college, from experience and/or self-study.

Specific Vocational Preparation (SVP) is the amount of time required to learn techniques, acquire the information, and develop the facility needed for average performance in a specific job-worker situation. The training, which may be acquired in a school, work, military, institutional, or vocational setting, does not include orientation training required of a fully qualified worker to become accustomed to the special conditions of a new job. SVP does include:

Vocational Education:	High school commercial or shop training, technical school, and that part of college training, which is organized around a specific vocational objective. (In evaluating training time information on jobs, regard 30 hours of high school shop or commerical training as equivalent to about 15 hours of on-the-job curriculum, except for liberal arts, as equivalent to about 2 years of specific vocational preparation, and regard each year of graduate schooling as a year of specific vocational preparation.)
Apprenticeship Training:	Training obtained only in those jobs offering apprenticeships.
Inplant Training:	Training given by employer in the form of organized classroom study.
On-the-job Training:	Instruction given to the learner or trainee on the job by a qualified worker.
Essential Experience in other jobs:	Experience received in less responsible jobs or other jobs which qualify for a higher grade job.

This section describes nine "levels" of general education development for occupational preparation, using the Scale of Specific Vocational Preparation. Six levels are defined by Reasoning Development (RD), Mathematical Development (MD), and Language Development (LD). Also included are Occupational Illustrations (OI) that are representative of Marketing and Distributive Occupations at the nine levels.

LEVEL 1 (Short demonstration only)

RD Apply commonsense understanding to carry out simple one - or two - step instructions. Deal with standardized situations with occasional or no variables in or from these situations encountered on the job.

MD Add and substract two-digit numbers. Multiply and divide 10's and 100's by 2, 3, 4, 5. Perform the four basic arithmetic operations with coins as part of a dollar. Perform operations with units such as cup, pint, and quart; inch, foot, and yard; and ounce and pound.

LD Reading - Recognize meaning of 2,500 two - or three-syllable words. Read at rate of 95-120 words per minute. Compare similarities and differences between words and between series of numbers.
Writing - Print simple sentences containing subject, verb, and object, and series of numbers, names, and addresses.
Speaking - Speak simple sentences, using normal word order, and present and past tenses.

OI Mark size, lot number, contents, or other identifying information or symbols on containers or directly on articles by placing stencil on object and rubbing ink or paint brush across open lettering.
Weigh items as part of the packing process, using balance scales. Place container on scale and add to or remove portion of contents

from container until scale registers specified weight.
Deliver telephone directories to residence and business establishments. following oral instructions or address list.
Fill glasses with tap beverage and hand them to waiters/waitresses who serve patrons.

LEVEL 2 (Anything beyond short demonstration up to and including 30 days)

RD Apply commonsense understanding to carry out detailed but uninvolved written or oral instructions. Deal with problems involving a new concrete variables in or from standardized situations.

MD Add, substract, multiply, and divide all units of measure. Perform the four operations with like common and decimal fractions. Compute ratio rate, and percent. Draw and interpret bar graphs. Perform arithmetic operations involving all American monetary units.

LD Reading - Passive vocabulary of 5,000-6,000 words. Read at rate of 190-215 words per minute. Read adventure stories and comic books, looking up unfamiliar words in dictionary for meaning, spelling, and pronunciation.
Read instructions for assembling model cars and airplanes.
Writing - Write compound and complex sentences, using cursive style, Proper end punctuation, and employing adjectives and adverbs.
Speaking - Speak clearly and distinctly with appropriate pauses and emphasis, correct pronunciation, variations in word order, using present, perfect, and future tenses.

OI Assist customer to launder or dryclean clothes, using self-service equipment. Give instructions to customer in clothes preparation, such as weighing, sorting, fog-spraying spots, and removing perishable buttons. Assign machine and point out posted instructions regarding equipment operation.
Well cigars, cigarettes, corsages, and novelties to patrons in hotels, nightclubs, and restaurants. Collect cash for items sold and make change.
Drive truck to transport materials to specified destinations such as railroad stations, plants, or residences. Calculate amount of bill and delivery charge, collect payment for goods delivered, making change as necessary.
Prepare and attach shipping tags to containers. Keep records of materials or items received or distributed.
Serve food to patrons at counters and tables of coffee shops, lunchrooms, and other dining establishments. Present menu, answer questions, and make suggestions regarding food and services.
Obtain credit information, such as status of installment accounts, on individuals from credit departments, using telephone. Copy information for credit record on file.

LEVEL 3 (Over 30 days up to and including 3 months)

RD Apply commonsense understanding to carry out instructions furnished in written, oral, or diagrammatic form. Deal with problems involving several concrete variables in or from standardized situations.

MD Compute discount, interest, profit, and loss; commission, markup, and selling price; ration and proportion, and percentage. Calculate surfaces volumes, weights, and measures.

LD Reading - Read a variety of novels, magazines, atlases, and encyclopedias Read safety rules, instructions in the use and maintenance of shop tools and equipment, and methods and procedures in mechanical drawing and layout work.

Writing - Write reports and essays with proper format, punctuation, spelling, and grammar, using all parts of speech.

Speaking - Speak before an audience with poise, voice control, and confidence, using correct English and well-modualted voice.

OI Operate cord or cordless switchboard to provide answering service for clients. Greet caller and announce name or phone number of client. Record and deliver messages, furnish information, accept orders, and relay calls. Place telephone calls at request of client or to locate client in emergencies. File messages.

Requisition transportation from motor, railroad, and airline companies to ship plant products. Read shipping orders to determine quantity and type of transportation needed. Contact company to make arrangements and to issue instructions for loading products. Annotate shipping orders to inform shipping department of loading locations and time of arrival of transportation.

Drive truck over established route to collect coins and refill vending machines. Load truck with supplies according to written or verbal instructions. Drive truck to establishment, collect coins, refill machines, and record amount of money collected. Report malfunctioning machine to maintenance department for repairs.

LEVEL 4 (Over 3 months up to and including 6 months)

RD Apply principles of rational systems (e.g., bookkeeping) to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Interpret a wide variety of instructions furnished in written, oral, diagrammatic, or schedule form.

MD Practical application of fractions, percentages, ration and proportion, practical algebra (and, depending on occupational area, certain other algebraic, geometric and/or trigonometric applications).

LD Reading - Read novels, poems, newspapers, periodicals, journals, manuals, dictionaries, thesauruses, and encyclopedias.

Writing - Prepare business letters, expositions, summaries, and reports, using prescribed format and conforming to all rules of punctuation, grammar, diction, and style.

Speaking - Participate in panel discussion, dramatizations, and debates, Speak extemporaneously on a variety of subjects.

OI Draw and letter charts, schedules, and graphs to illustrate specified data, such as wage trends, absenteeism, labor turnover, and employment needs, using drafting instruments, such as ruling and lettering pens, T-squares, and straightedge.

Keep records of financial transactions of establishment. Balance books and compile reports to show statistics, such as cash receipts and expenditures, accounts payable and receivable, profit and loss, and other

items pertinent to operation of business.
Compose letters in reply to correspondence concerning such items as requests for merchandise, damage claims, credit information, delinquent accounts, or to request information. Read incoming correspondence, type or dictate reply, or select and complete form letters.
Interview applicants to obtain necessary information, including work experience, education, training, and occupational interest.
Compile lists of prospective customers to provide leads to sell service or merchandise. Contact prospective customers, explain features of product/service (e.g., insurance policy), and recommend (amount and type of coverage), based on analyses of prospect's circumstances.
Verify accuracy of loan applications and prepare file for each loan application. Compare original application with credit report. Approve loan and prepare check. Prepare loan worksheet, insurance record, credit report, and application copy for each loan.

LEVEL 5 (Over 6 months up to and including 1 year)

RD Apply principles of logical or scientific thinking to define problems, collect data, establish facts, and draw valid conclusions. Interpret an extensive variety of technical instructions in mathematical or diagrammatic form. Deal with several abstract and concrete variables.

MD Apply mathematical operations to frequency distributions, reliability and validity of tests, normal curve, and other analytic and/or algebraic/calculus functions (depending on occupation).

LD Reading - Read literature, book and play reviews, scientific and technical journals, abstracts, financial reports, and legal documents.
Writing - Write novels, plays, editorials, journals, speeches, manuals, criques, poetry, and songs.
Speaking - Conversant in the theory, principles, and methods of effective and persuasive speaking, voice and diction, phonetics, and discussion and debate.

OI Prepare and conduct inservice training for company personnel. Evaluate training needs in order to develop educational materials for improving performance standards Perform research relating to course preparation and presentation. Compile data for use in writing manuals, handbooks, and other teaching aids. Develop teaching outlines and lesson plans, determine content and duration of courses, and select appropriate instructional procedures, based on analysis of training requirements for company personnel.
Perform assigned duties in business organization, depending on nature of business, to gain knowledge and experience for promotion to management positions. Participate in work of such department of business of credit, sales, advertising, accounting, traffic, warehousing, or personnel, performing various duties under close supervision. Observe techniques utilized by experienced workers, learn line and staff functions of each department, and become familiar with management policies and viewpoints as they affect each phase of business operations.
Receive, store, and issue supplies and equipment and compile records of supply transactions. Verify that supplies received are listed as requisitions and invoices. Store, issue, and inventory supplies and

equipment. Compile report of expenditures.

Sell men's furnishings, such as neckties, shirts, belts, hats, and accessories. Advise customer on coordination of accessories.

LEVEL 6 (Over 1 year up to and including 2 years)

RD Apply principles of logical or scientific thinking to a wide range of intellectual and practical problems. Deal with nonverbal symbolism in its most difficult phases. Deal with a variety of abstract and concrete variables. Apprehend the most abstruse classes of concepts.

MD Apply fundamental concepts of algebra and geometry (depending on occupational assignment) and work with mathematical statistics, probability and applications, and mathematical functions dealing with statistical inference and econometrics.

LD Same as Level 5.

01 Sell insurance to new and present clients, recommending amount and type of coverage, based on analysis of prospect's circumstances. Compile list of prospective clients to provide leads most likely to produce additional business. Explain features of policies offered. Calculate rates to be applied to policy for each prospect, using rate books.

Alter women's ready-to-wear garments as instructed. Rip stitches from darts and seams of section to be altered. Operate sewing machine to sew ripped sections to customer's measurements. Sew sections of garment, such as hem, sleeve, or lining, using needle and thread.

LEVEL 7 (Over 2 years up to and including 4 years)

01 Supervise and coordinate activities of clerical staff of an establishment. Prepare work schedules and expedite work flow. Review work performed, prepare employee ratings, and conduct employee benefit and insurance programs. Compute and compile data and prepare records and reports. Study and standardize procedures to improve efficiency of department. Coordinate work operations of other department. Estimate budget needs.

Supervise and coordinate activities of pantry, storeroom and noncooking kitchen workers, and purchase or requisition foodstuffs, kitchen supplies, and equipment. Inspect kitchen and storerooms to insure that sufficient foodstuffs and supplies are on hand to insure efficient service. Examine incoming purchases for quality. Coordinate activities of cleaning personnel and storage supply workers.

LEVEL 8 (Over 4 years up to and including 10 years)

01 Manage industrial organization. Determine and execute administrative policies through subordinate manager. Coordinate activities of departments, such as production, distribution, engineering, maintenance, personnel, and selling. Plan and direct marketing of product to develop new markets and maintain sales volume and competitive position in industry

LEVEL 9 (Over 10 years)

01 Develop and administer policies of organization in accordance with corporation character. Establish operating objectives and policies for firm. Review progress and make necessary changes in company plans. Direct preparation of major financial programs, such as pricing policies and salary and wage schedules, to insure operating efficiency and adequate investment and dividend returns.

Aptitudes

The U. S. Training and Employment Service defines "aptitudes" as "the specific capacities or abilities required of an individual in order to facilitate the learning of some task or job duty." The kinds and amounts of aptitudes possessed by a person can be measured by administering and interpreting tests. For example, the aptitude requirements for jobs, for nine aptitudes found to be important in job success, might be determined from research on the General Aptitude Test Battery (GATB)[3] and two others which were later described the U. S. Training and Employment Service for the purpose of being able to determine the requirements for all jobs. The 11 categories of aptitudes are each expressed in one of five levels which reflect equivalent amounts of aptitudes possessed by segments of the working population:

Level 1: An extremely high degree of the aptitude.
Level 2: An above average of high degree of the aptitude.
Level 3: A medium degree of the aptitude, ranging from slightly below to slightly above average.
Level 4: A below average or low degree of the aptitude.
Level 5: A negligible degree of the aptitude.

All jobs analyzed should be rated for all aptitudes required, indicating the level of each of the 11 aptitudes required of the worker for average satisfactory performance.

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[3]U. S. Department of Labor, Manpower Administration, U. S. Training and Employment Service, "Development, "Section II, Manual for the Aptitude Test Battery Washington: U.S. Government Print Office.

The following aptitude descriptions include an alphabetic symbol commonly used (shown in parentheses).

Intelligence (G):	General learning ability. The ability to "catch on" or understand instructions and underlying principles; the ability to reason and make judgments. Closely related to "doing well in school."
Verbal Aptitude (V):	The ability to understand meaning of words and to use them effectively. The ability to comprehend language, to understand relationships between words and to understand meanings of whole sentences and paragraphs.
Numerical Aptitude (N):	The ability to perform arithmetic operations quickly and accurately.
Spatial Aptitude (S):	Ability to think visually of geometric forms and to comprehend the two-dimensional representation of three-dimensional objects. The ability to recognize the relationships resulting from the movement of objects in space.
Form Perception (P):	Ability to perceive pertinent detail in objects or in pictorial or graphic material. Ability to make visual comparisons and discriminations and see slight differences in shapes and shadings of figures and widths and lengths of lines.
Clerical Perception (Q):	Ability to perceive pertinent detail in verbal or tabular material. Ability to observe differences in copy, to proofread words and numbers, and to avoid perceptual errors in arithmetic computation. A measure of speed of perception is required in many industrial jobs even when the job does not have verbal or numerical content.
Motor Coordination (K):	Ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed. Ability to make movement response accurately and swiftly.
Finger Dexterity (F):	Ability to move fingers, and manipulate small objects with fingers, rapidly or accurately.
Manual Dexterity (M):	Ability to move hands easily and skillfully. To work with hands in placing and turning motions.

Eye-Hand-Foot Coordination (E): Ability to move the hand and foot coordinately with each other in accordance with visual stimuli. (Not measured in GATB.)

Color Discrimination (C): The ability to match or discrimate between colors in terms of hue, saturation, and brilliance. To identify a particular color or color combination from memory and be able to perceive harmonious or contrasting color combinations. (Not measured in GATB.)

Temperaments

"Temperaments" are "the adaptability requirements made on the worker by specific types of job-worker situations." Employers often look for "personal characteristics" or "traits" as well as work experience, education, and training. The job analyst can evaluate these traits in terms of requirements made on the worker by specific job-worker situations. The following include (1) the single letter symbol for the "temperament" factor, (2) the acronym for the factor which is used when referring to the factor in a narrative situation, and (3) the definition of the factor followed by (4) a statement to serve as a guide when considering use of the factor. Also included is (5) an illustrative specific job-worker situation in which the factor is important.

D-DCD: Adaptability to accepting responsibility for the Direction, Control, or Planning of an activity.
Consider jobs for this factor when the worker is in a position to negotiate, organize, direct, supervise, formulate practices, or make final decisions. Do not consider when the planning is for one's own activities.
Coordinates activities in international cargo traffic division of air and surface cargo traffic agency.
Is responsible for an entire project or program.
Plans for future to keep abreast of changes in industry.
Plans artistic effects for outside displays, such as street decorations, using flags, cloth, and crepe paper, and directs workers in erecting these displays.

F-FIF: Adaptability to situations involving the interpretation of Feelings, Ideas, or Facts in terms of personal viewpoint.
Reflects original ideas or feelings in work. Perceives or appreciates a mental image or the translation of a mental image created by another.
Consider jobs for this factor when the worker is called upon to use creativity, self-expression, or imagination. Interpretation is defined as an individual's concept of a work or art, subject, plan, etc. as shown in performance, criticism, artistic representation, or the like.

Designs artistic effects of outside displays, such as street decorations, fair grounds displays, and building decorations around central themes, such as holidays, seasons, political rallies, or local celegrations or shows, choosing appropriate colors, shapes, and sizes or media to focus public attention and create desired effects.

Creates advertising themes; designs layouts; and selects colors, coloring media, props, and lighting arrangements for advertising displays.

J-SJC: Adaptability to making generalizations, evaluations or decisions based on Sensory or Judgmental Criteria.
Consider jobs for this factor when the worker relies on one or more of five physical senses or relies on knowledge gained by experience to make evaluations. Be aware of the situations in which the worker appears to be evaluating on the basis of senses or experience, but is actually using memorized data.

Interprets attitude of customer.

Determines appropriate colors and color combinations according to room size, its exposure, and intended use, and available colors, patterns, and textures; and advises clients in selection of draperies, floor coverings, paint, and wallpaper.

Judges effectiveness of different physical arrangements of illustrations, and print sizes and types in relation to designated advertising media to plan appropriate advertising layout.

M-MVC: Adaptability to making generalizations, or decisions based on Measurable or Verifiable Criteria.
Consider jobs for this factor when the worker makes evaluations on the basis of data. Be aware of situations in which the worker appears to be evaluating on the basis of senses or experience, but is actually using memorized data.

Analyzes records of present and past operations, costs, realized revenues, administrative commitments, and obligations to establish basis for preparing operating budget.

Settles claims on the basis of presented facts.

Writes article, essay, pamphlet, or book on basis of facts.

Determines initial claim eligibility, paying jurisdiction, and type of claim to be filed for unemployment benefits from the claimant's and employer's statements and department records.

P-DEPL: Adaptability to Dealing with People beyond giving and receiving instructions. Cooperates with other workers. Has agreeable working relations with others. Contact others in successful manner.
Consider jobs for this factor when the worker must relate to people in situations involving more than giving or receiving instructions.

Supervises and coordinate activities of work crews engaged in distributing sample merchandise, handbills, or coupons. Confers with superiors to plan activities and resolve operational problems relating to distribution of materials.

Promotes sales and creates goodwill for firm's products by making speeches at retail dealers conventions and calling on individual merchants to advise ways and means of increasing sales.

Talks with people to give and obtain information relating to the relay of incoming, outgoing, and interoffice telephone calls.

R-REPCON: Adaptability to performing repetitive work, or to continuously performing the same work, according to set procedures, sequence, or pace. Distinguish between work that is inherently of a repetitive nature and the human facility of making the familiar routine.
Consider jobs for this factor when the work is performed according to a routine, or set sequence, and there is an absence of diversion or room for independent judgement.

Addresses cards, envelopes, advertising literature, packages, or similar items for mailing, by hand or using typewriter. (The variety of materials addressed does not change the repetitive nature of the work.)

S-PUS: Adaptability to Performing Under Stress when confronted with emergency, critical, unusual, or dangerous situations; or in situations in which working speed and sustained attention are make-or-break aspects of the job. Possess calmness and presence of mind in critical situations. Concentrates amid distractions.
Consider jobs for this factor when the worker is subject to danger or risk to a significant degree, or to tension as a regular, consistent part of the job.

Renders variety of personal services conducive to safety and comfort of airline passengers during flight. (Must perform duties calmly and efficiently when faced with situations, such as critical illness of a passenger, severe weather conditions, or malfunctioning of aircraft which would lead to other than normal landings and procedures. Depaending on the length of flight, may be under considerable pressure to perform all the required duties withing a limited time.)

Itemizes and totals customer's purchases in self-service grocery or department store, using cash register. (Long lines of waiting patrons induces a sense of pressure on worker to accelerate work pace to peak capacity and requires extra caution to avoid errors.)

T-STS: Adaptability to situations requiring the precise attainment of Set limits, Tolerances, or Standards. Performs arithmetic computations and prepares numerical records accurately. Consider jobs for this factor when the worker must be precise, thorough, exacting, or meticulous in regard to material worked; or in activities such as numerical determinations, record preparation, or inspecting.

Operates a billing macine to transcribe from office records data such as customer's name, address, and items purchased, or services rendered. Calculates totals, new amounts, and discounts, by addition, subtraction, and multiplication; and records computations.

Examines articles and advises customer of possible shrinkage, loss of shape, or other damage that might result to articles during processing. Makes notation of defects in articles. Prepares work order slip. Pins or staples identifying tag to article.

V-VARCH: Adaptability to performing a variety of duties, often changing from one task to another of a different nature without loss of efficiency or composure. (Do not interpret "variety" as meaning merely several. Several duties, all requiring the same or very similar skills, knowledge, and abilities do not constitute variety, which is the key word in this factor. If the several duties in a job indicate significant differences in technologies, techniques, and procedures, environmental factors, and physical demands, or work situations, this factor should be considered.)

Consider jobs for this factor when the worker applies different principles and techniques of specific field to appraise or investigate condition or state of object, system, or activity.

Performs a variety of the following or similar duties. utilizing knowledge of systems or procedures: Copies data, compiles records and reports. Tabulates and posts data. Computes wages, taxes, etc. Records orders. Gives information to and interview customers and claimants. Receives, counts, and pays out cash. Prepares, issues, and sends out receipts, bills policies, invoices. Prepares inventory. Adjusts complaints. Operates office machines. Opens and routes mail. Answers correspondence. (Different techniques and procedures.)

Accommodates hotel patrons by performing the following duties: Registers and assigns guests to rooms. Gives escort instructions. Date-stamps. sorts, and racks, mail and messages. Transmits and receives messages, using telegraphic devices and telephone. Answers inquiries. Maintains records of rooms and accounts. Collects payments from departing guests. Makes and confirms reservations. (Frequent interruptions and change of activities; different procedures.)

Coordinates activities of international traffic division of railway-express agency and negotiates settlement between foreign and domestic shippers. Plans and directs flow of air and surface traffic. Supervises workers engaged in receiving and shipping freight, documenting, waybilling, assessing charges, and collecting fees. Negotiates with foreign and domestic shippers. Prepares reports. (Frequent change of activities.)

Services automobiles, buses, trucks, and other automotive vehicles with fuel, lubricants, and accessories. Fills fuel tank. Adds required amounts of oil to crankcase and water to radiator and battery. Washes windshield. Lubricates vehicle. Changes oil. Replaces accessories, such as oil filter, air filter, windshield wiper blades, and fan belt. Drains radiator and fills with specified amount of antifreeze. Changes spark plugs. Repairs or replaces tires. Replaces lights. Washes and waxes vehicle. Collects cash for services or supplies or completes credit form. (Different techniques and procedures.)

APPENDIX H

OCCUPATIONAL PERCEPTIONS

A. Write the TITLES of 10 occupations you believe will be in demand--in your own school's service area--during the next five or six years.

B. Circle the LEVEL OF TRAINING you feel is needed for these 10 occupations. Use the following scale:

Level 1 - Short demonstration only
Level 2 - Anything beyond short demonstration up to and including 30 days
Level 3 - Over 30 days up to and including 3 months
Level 4 - Over 3 months up to and including 6 months
Level 5 - Over 6 months up to and including 1 year
Level 6 - Over 1 year up to and including 2 years
Level 7 - Over 2 years up to and including 4 years
Level 8 - Over 4 years up to and including 10 years
Level 9 - Over 10 years

C. Place a checkmark beside the occupations on your list that you feel are "dead-end" occupations; e.g., little likelihood for advancement or longevity.

D. Identify occupations (on your list) for which training may be obtained during high school:
Circle "V" if the training is provided through your local secondary schools (area vocational-technical school or high school) to prepare students for entry-level jobs AND THEN
Circle "P" if that training would also serve to prepare students for post-high school advanced study in the occupational area.

E. For each of the occupations you listed, rate the level of Verbal Aptitude (V) and Numerical Aptitude (N) that you feel is necessary to perform the occupation.
Verbal Aptitude (V) - The ability to understand the meaning of words and to use them effectively. It is also the ability to comprehend language, to understand relationships between words, and to understand meanings of whole sentences and paragraphs.
Numerical Aptitude (N) - The ability to perform arithmetic operations quickly and accurately.

Using the following scale, circle the level for the Verbal and Numerical Aptitudes:

Level 1 - An EXTREMELY HIGH degree of the aptitude
Level 2 - An ABOVE AVERAGE degree of the aptitude
Level 3 - A MEDIUM degree of the aptitude, ranging from slightly below to slightly above average
Level 4 - A BELOW AVERAGE or low degree of the aptitude
Level 5 - A NEGLIGIBLE degree of the aptitude

F. Consider the following characteristics of academically disadvantaged students:
-Cannot read the normal learning materials
-Cannot perform job-related written tasks
-Do not have the basic mathematical skills
-Generally perform below their expected grade level (limited vocabulary, poor listening skills, limited knowledge base, etc.)
On your list of 10 occupations, CIRCLE those for which you feel vocational preparation could be satisfactorily achieved by disadvantaged students IF:
-Interests, aptitudes, and abilities were accurately assessed, and
-Related counseling and a system for related academic support were provided.

BEST COPY AVAILABLE

OCCUPATIONAL PERCEPTIONS WORKSHEET

A	B	C	D		E	
			Secondary Training		Aptitude Required	
Occupations in Demand	Level of Training	Dead-End	Voc.	V.Prep.	Verbal	Numerical
1.	1 2 3 4 5 6 7 8 9		V	P	1 2 3 4 5	1 2 3 4 5
2.	1 2 3 4 5 6 7 8 9		V	P	1 2 3 4 5	1 2 3 4 5
3.	1 2 3 4 5 6 7 8 9		V	P	1 2 3 4 5	1 2 3 4 5
4.	1 2 3 4 5 6 7 8 9		V	P	1 2 3 4 5	1 2 3 4 5
5.	1 2 3 4 5 6 7 8 9		V	P	1 2 3 4 5	1 2 3 4 5
6.	1 2 3 4 5 6 7 8 9		V	P	1 2 3 4 5	1 2 3 4 5
7.	1 2 3 4 5 6 7 8 9		V	P	1 2 3 4 5	1 2 3 4 5
8.	1 2 3 4 5 6 7 8 9		V	P	1 2 3 4 5	1 2 3 4 5
9.	1 2 3 4 5 6 7 8 9		V	P	1 2 3 4 5	1 2 3 4 5
10.	1 2 3 4 5 6 7 8 9		V	P	1 2 3 4 5	1 2 3 4 5

APPENDIX I

UNIVERSITY OF PITTSBURGH
DEPARTMENT OF VOCATIONAL EDUCATION

NEW AND EMERGING OCCUPATIONS: OPPORTUNITIES FOR THE DISADVANTAGED
A Seminar for Vocational Guidance and Counseling

Friday, December 9, 1983

EXIT EVALUATION

POSITION: _____Counselor, Comprehensive High School
_____Counselor, Area Vocational-Technical School
_____Other (please specify)_____

Please circle your responses to the following statements. Use the scale SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree.

I. PRODUCT/PROCESS

A. PRODUCT EVALUATION

1. Topics were relevant to my needs for clarification of career opportunities for academically disadvantaged students. SA A D SD

2. This workshop increased my knowledge about the academic-support needs of disadvantaged students enrolled in vocational programs. SA A D SD

3. This workshop increased my knowledge about the occupational potential of/for disadvantaged students. SA A D SD

4. This workshop will help me focus goals and activities toward more effective assessment and advisement of disadvantaged students. SA A D SD

5. The materials presented will help me collect and use information to assist disadvantaged students in occupational preparation. SA A D SD

B. PROCESS EVALUATION

1. Workshop format (sequence and content) was appropriate.	SA	A	D	SD
2. The focus of the workshop was appropriate.	SA	A	D	SD
3. Time allotted for presentations was adequate.	SA	A	D	SD
4. Presentations were well-planned and well-made.	SA	A	D	SD
5. Printed materials will be useful to me.	SA	A	D	SD

	Excellent	Good	Fair	Poor
II. SUMMARY EVALUATION				
1. My overall reaction to this seminar:	1	2	3	4
2. My reaction to having more seminars focusing on vocational guidance:	1	2	3	4
3. This seminar provided information that will help me assure equal opportunities for disadvantaged students:	1	2	3	4

III. COMMENTS/RECOMMENDATIONS FOR FUTURE SEMINARS:

1.

2.

3.

Summary of Responses
Exit Evaluation APPENDIX J.1
New and Emerging Occupations: Opportunities for the Disadvantaged
A Seminar for Vocational Guidance and Counseling

Position:
88% Counselor, Comprehensive High School
0% Counselor, Area Vocational Technical School
12% Other N=26

AREA OF PRESENTATION	Effectiveness				
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Response
I. PRODUCT/PROCESS	%	%	%	%	%
A. PRODUCT EVALUATION					
1. Topics were relevant to my needs for clarification of career opportunities for academically disadvantaged students.	19	77	4	0	0
2. This workshop increased my knowledge about the academic-support needs of disadvantaged students enrolled in vocational programs.	27	65	8	0	0
3. This workshop increased my knowledge about the occupational potential of/for disadvantaged students.	23	69	4	0	4
4. This workshop will help me focus goals and activities toward more effective assessment and advisement for disadvantaged students.	42	54	4	0	0
5. The materials presented will help me collect and use information to assist disadvantaged students in occupational preparation.	31	69	0	0	0

SUMMARY OF kESPONSES - EXIT EVALUATION
NEW AND EMERGING OCCUPATIONS: OPPORTUNITIES FOR THE DISADVANTAGED
PAGE 2

AREA OF PRESENTATION	Effectiveness				
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Respnse
B. PROCESS EVALUATION	%	%	%	%	%
1. Workshop format (sequence and content) was appropriate.	35	62	4	0	0
2. The foucs of the workshop was appropriate.	35	65	0	0	0
3. Time allotted for presentations was adequate.	31	69	0	0	0
4. Presentations were well-planned and well-made.	38	62	0	0	0
5. Printed materials will be useful to me.	42	58	0	0	0

	Excellent	Good	Fair	Poor
II. SUMMARY EVALUATION	%	%	%	%
1. My overall reaction to this seminar:	46	54	0	0
2. My reaction to having more seminars focusing on vocational guidance:	58	42	0	0
3. This seminar provided information that will help me assure equal opportunities for disadvantaged students:	35	54	12	0

SUMMARY OF RESPONSES - EXIT EVALUATION
NEW AND EMERGING OCCUPATIONS: OPPORTUNITIES FOR THE DISADVANTAGED

III. COMMENTS/RECOMMENDATIONS FOR FUTURE SEMINARS:

Following lunch we needed a time in which we were personally involved because this is the time - after lunch when attention lagged. Speakers had good information but no active participation.

An afternoon well worth spent. Wouldn't want to have missed it. Well planned, executed smoothly, excellent presenters and a day filled with hospitality and warmth!

More specific information on correlating aptitudes/assessment results, sex-equity.

Enjoyed the opportunity to share concerns we all have for students with special needs and to gain insights into approaches to give them academic and career support. I felt Mr. Monaco's presentation was very informative and relavant to educators. The University of Pittsburgh, as always, continues to demonstrate its concern for the counselors role and the opportunity to provide inservice programs.

Very good. More information on attitudes.

Handicapped Students Vocational training and Job Opportunities.

Materials assessment for the middle school age student - because 9th grade is usually too late.

Projected job opportunities.

APPENDIX K.1

University of Pittsburgh

SCHOOL OF EDUCATION
Vocational Education

December 20, 1983

Ms. Clara Lea Gaston
Consultant, Handicapped &
Disadvantaged Programs
Bureau of Vocational Education
Pennsylvania Department of Education
333 Market Street - Box 911
Harrisburg, PA 17108

Dear Clara Lea:

This is a belated "sorry you couldn't make it" to the December 9 seminar for Vocational Guidance and Counseling on "New and Emerging Occupations: Opportunities for the Disadvantaged." A copy of the program is enclosed.

The exit evaluations were very good (we'll send you a copy) and participants' comments showed that this type of information is welcomed as well as needed by counselors.

Hope your holidays are filled with happiness.

Sincerely,

Ona Kay Kinter

Gayle J. Marco

OKK/hjm

Enclosure

PITTSBURGH, PA. 15260

University of Pittsburgh

SCHOOL OF EDUCATION
Vocational Education

December 20, 1983

Ms. Charlene McAbee
Employment and Security Specialist
Office of Employment Security
1307 Pittsburgh State Office Bldg.
300 Liberty Ave.
Pittsburgh, PA 15222

Dear Charlene:

Thank you so much for your excellent presentation at the December 9 seminar on vocational guidance and counseling, "New and Emerging Occupations: Opportunities for the Disadvantaged." The participants indicated that they got a lot of "good" information, which was, of course, the reaction we had hoped for!

I'm happy to have had the chance to talk with you - and your sister - during lunch. Best wishes to both of you for a happy holiday.

Thanks again for your help.

Sincerely

Ona Kay Kinter
Workshop Coordinator
Department of Vocational Education

OKK/hjm

cc: Mr. James C. Frye
Regional Director
Office of Employment Security

PITTSBURGH, PA 15260

University of Pittsburgh

SCHOOL OF EDUCATION
Vocational Education

December 20, 1983

Ms. Susan Downs Pettigrew
Education Specialist
Urban League of Pittsburgh
2358 Fifth Avenue
Pittsburgh, PA 15219

Dear Susan:

Thank you so much for your excellent presentation at the December 9 seminar on vocational guidance and counseling, "New and Emerging Occupations: Opportunities for the Disadvantaged." We all certainly benefited from the information you presented, and the participants' reaction, as shown in their evaluations and comments, was very positive. Dr. Carter surely came through with a "good thing" when she recommended you as a presenter.

Best wishes to you for a happy holiday.

Thanks again for your help.

Sincerely,

Ona Kay Kinter
Workshop Coordinator
Department of Vocational Education

OKK/hjm

cc: Dr. Alice Carter

PITTSBURGH, PA 15260

University of Pittsburgh

SCHOOL OF EDUCATION
Vocational Education

December 20, 1983

Mr. Fred A. Monaco
Manager, Career Development
Student Placement Section
Pittsburgh Board of Public Education
635 Ridge Ave.
Pittsburgh, PA 15212

Dear Fred:

Thanks so much for your help at the December 9 seminar for vocational guidance and counseling on "New and Emerging Occupations: Opportunities for the Disadvantaged." The exit evaluations were very good, and participants' comments reflected a need for the kind of information you presented. You were a definite asset to the program!

Hope your holidays are filled with happiness.

Sincerely,

Ona Kay Kinter
Workshop Coordinator
Department of Vocational Education

OKK/hjm

cc: Mr. Robert Lamping
Vocational Director
Pittsburgh Board of Public Education

PITTSBURGH, PA 15260

University of Pittsburgh

SCHOOL OF EDUCATION
Vocational Education

December 20, 1983

Dr. John G. Drugo
3221 Cambridge Drive
Murraysville, PA 15668

Dear John:

Many thanks for the excellent presentation at the December 9 seminar for Vocational Guidance and Counseling. The evaluations were very good and comments showed that the participants got good information and ideas.

I'll talk to you later about our "needs" for other workshops this year. Hope you'll be available.

Sincerely,

Ona Kay Kinter, Ph.D.
Workshop Coordinator
Department of Vocational Education

OKK/hjm

PITTSBURGH, PA. 15260